Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 28 Howe Sound–Burrard Inlet

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Rapport statistique canadien des sciences halieutiques et aquatiques

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Les numéros 1 à 25 de cette série ont été publiés à titre de relevés statistiques, Services des pêches et de la mer. Les numéros 26 à 160 ont été publiés à titre de rapports statistiques du Service des pêches et de la mer, ministère des Pêches et de l'Environnement. Le nom actuel de la série a été établi lors de la parution du numéro 161.

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CATALOGUE OF SALMON STREAMS AND SPAWNING ESCAPEMENTS

STATISTICAL AREA 28

HOWE SOUND - BURRARD INLET

by

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ABSTRACT

Hancock, M.J. and D.E.Marshall, 1986, Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 28, Howe Sound - Burrard Inlet. Can. Data Rep. Fish and Aquat. Sci. 557: xiv + 190 p.

Catalogue containing each stream's location, spawning distribution, barriers and points of difficult ascent, escapement records and other general data pertaining to the stream. The catalogue also includes a topographical map of the stream and in some cases a sketch map which further describes the surrounding area.

Keywords: British Columbia, Statistical Area 28, Howe Sound - Burrard Inlet, salmon streams, spawning escapements.

RÉSUMÉ

Hancock, M.J. and D.E.Marshall, 1986. Catalogue of Salmon Streams and Spawning Escapements of Statistical Area 28, Howe Sound - Burrard Inlet. Can. Data Rep. Fish and Aquat. Sci. 557: xiv + 190 p.

Le présent répertoire donne l'emplacement de chaque cours d'eau, la répartition de fraie, les points de remonte difficile, les données sur les saumons de remonte et d'autres information générales concernant le cours d'eau. On y trouve aussi une carte topographique de l'emplacement du cours d'eau et, dans quelque cas, un croquis décrivant la zone environte.

Mots-cles: Colombie-Britannique, zone statistique 28, Howe Sound - Burrard Inlet, cours d'eau a saumons, remonte.

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(Avalon Creek) 7
(Branch 100 Creek 9
BROHM RIVER 12
BROTHERS RIVER 15
CAPILANO RIVER 18,19
CHAPMAN CREEK (Mission Creek) 23
CHASTER CREEK (Gower Creek) 26
CHEAKAMUS RIVER 29
(Chuck-Chuck Creek) 34
CYPRESS CREEK 37
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EAGLE CREEK (Eagle Harbour Creek) ... 46
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WAKEFIELD CREEK 179
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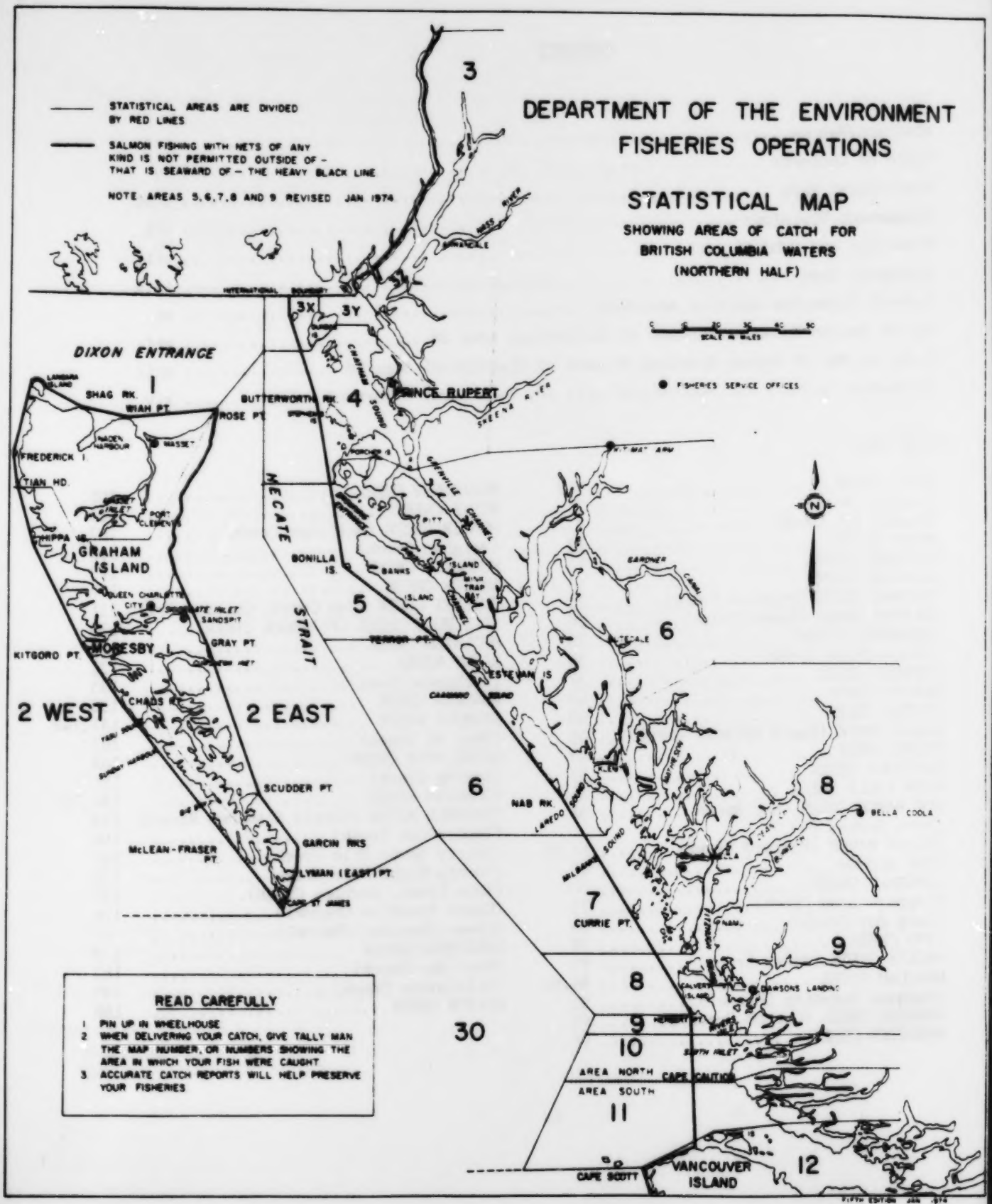
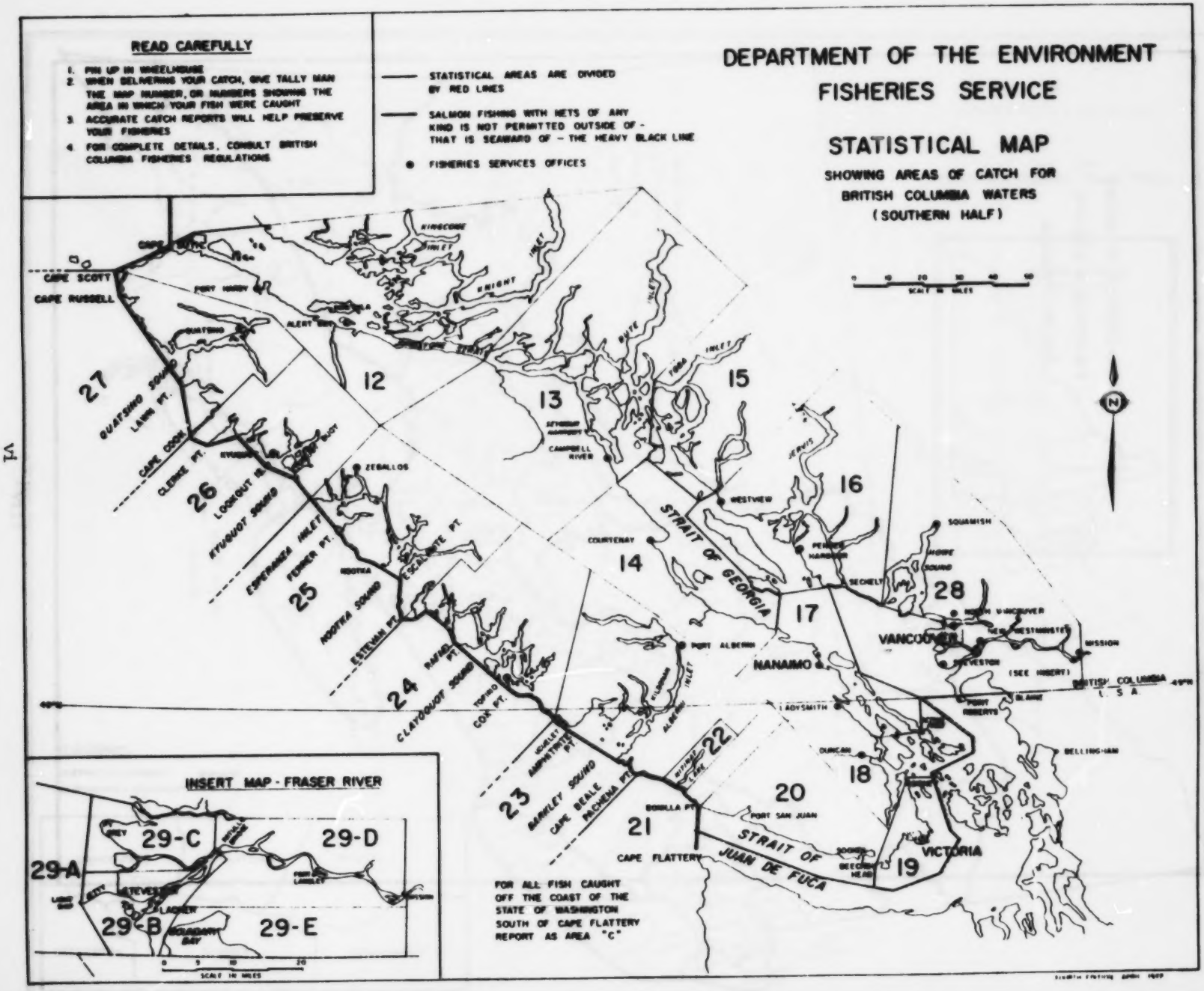

STATISTICAL AREAS ARE DIVIDED BY RED LINES
SALMON FISHING WITH NETS OF ANY KIND IS NOT PERMITTED OUTSIDE OF - THAT IS SEAWARD OF - THE HEAVY BLACK LINE
NOTE AREAS 5, 6, 7, 8 AND 9 REVISED JAN 1974
DEPARTMENT OF THE ENVIRONMENT
FISHERIES OPERATIONS
STATISTICAL MAP
SHOWING AREAS OF CATCH FOR BRITISH COLUMBIA WATERS (NORTHERN HALF)
FISHERIES SERVICE OFFICES
DIXON ENTRANCE
PRINCE RUPERT
GRAHAM ISLAND
QUEEN CHARLOTTE CITY
MORESBY I.
2 WEST
2 EAST
HECATE STRAIT
BONILLA IS.
ESTEVAN IS.
SCUDDER PT.
McLEAN-FRASER PT.
GARCIN RKS.
LYMAN (EAST) PT.
NAB RK.
CURRIE PT.
BELLA COOLA
DAWSONS LANDING
CAPE CAUTION
AREA NORTH
AREA SOUTH
CAPE SCOTT
VANCOUVER ISLAND
READ CAREFULLY
1 PIN UP IN WHEELHOUSE
2 WHEN DELIVERING YOUR CATCH, GIVE TALLY MAN THE MAP NUMBER, OR NUMBERS SHOWING THE AREA IN WHICH YOUR FISH WERE CAUGHT
3 ACCURATE CATCH REPORTS WILL HELP PRESERVE YOUR FISHERIES
FIFTH EDITION JAN 1974


READ CAREFULLY
1. FIN UP IN WHEELHOUSE
2. WHEN DELIVERING YOUR CATCH, GIVE TALLY MAN THE MAP NUMBER, OR NUMBERS SHOWING THE AREA IN WHICH YOUR FISH WERE CAUGHT
3. ACCURATE CATCH REPORTS WILL HELP PRESERVE YOUR FISHERIES
4. FOR COMPLETE DETAILS, CONSULT BRITISH COLUMBIA FISHERIES REGULATIONS
STATISTICAL AREAS ARE DIVIDED BY RED LINES
SALMON FISHING WITH NETS OF ANY KIND IS NOT PERMITTED OUTSIDE OF - THAT IS SEAWARD OF - THE HEAVY BLACK LINE
FISHERIES SERVICES OFFICES
DEPARTMENT OF THE ENVIRONMENT
FISHERIES SERVICE
STATISTICAL MAP
SHOWING AREAS OF CATCH FOR BRITISH COLUMBIA WATERS (SOUTHERN HALF)
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29-B
29-C
29-D
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24
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22
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19
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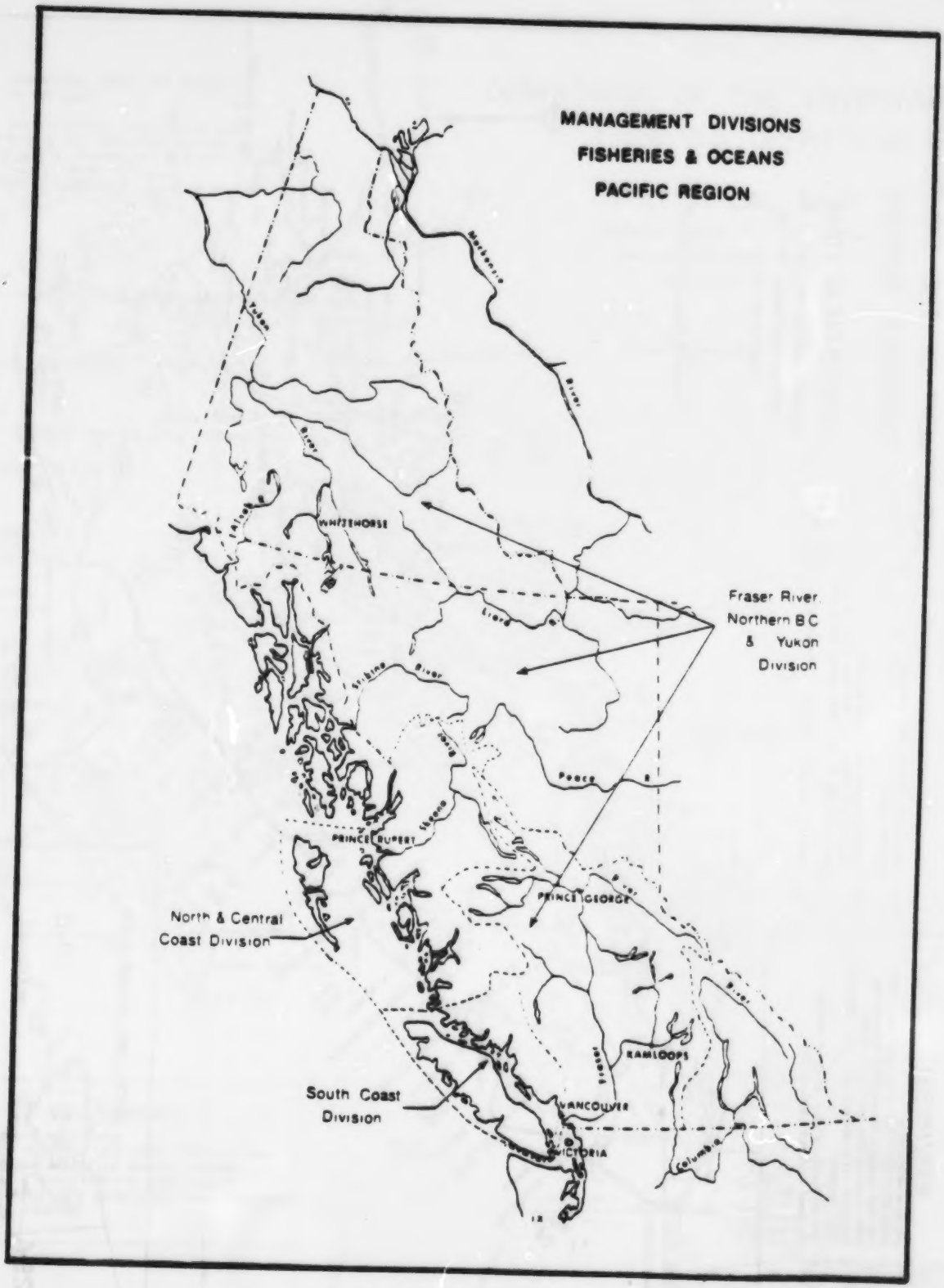
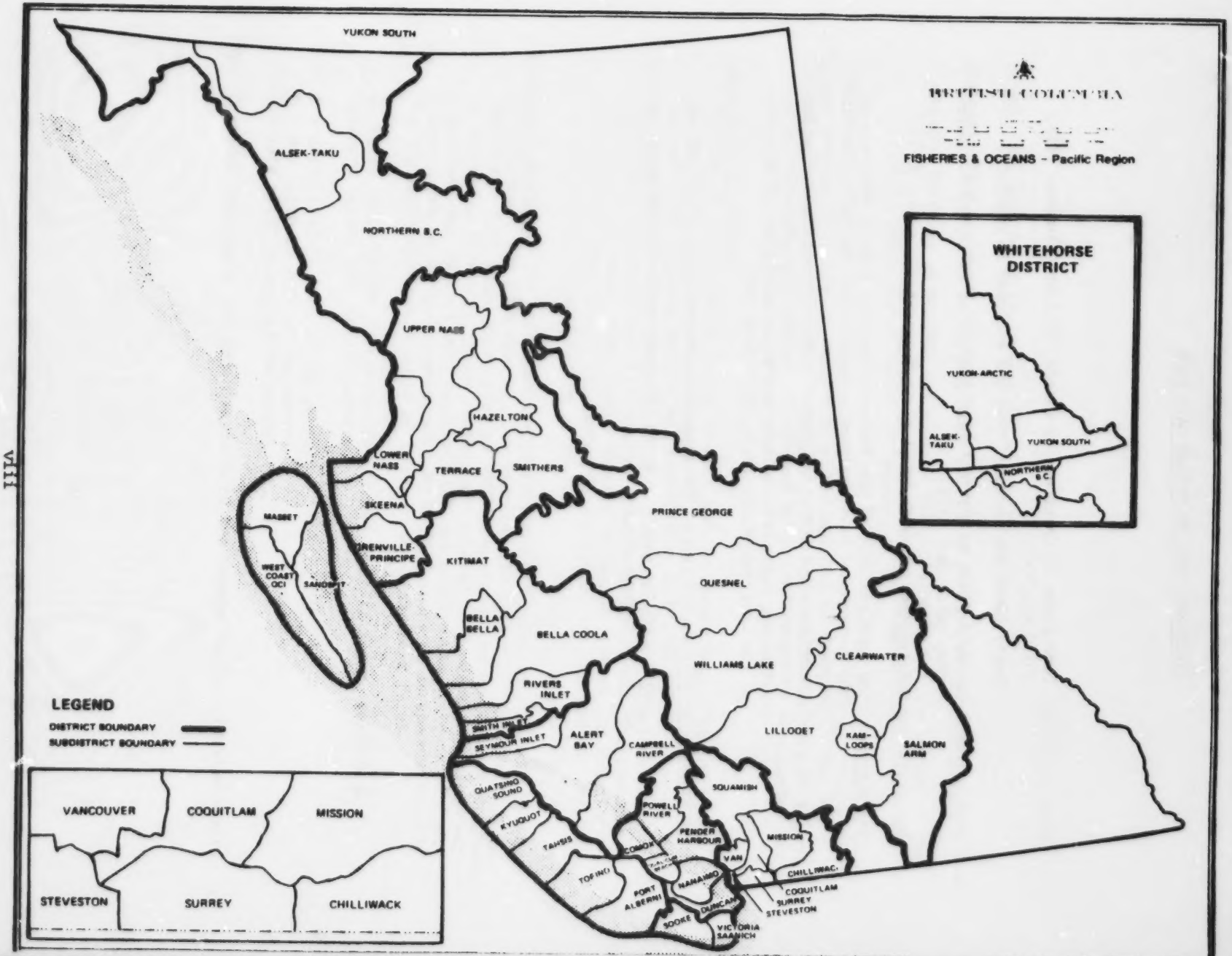
16
15
14
13
12
CAPE SCOTT
CAPE RUSSELL
QUATSINO SOUND
CAPE COOK
CLERKE PT.
ESPERANZA INLET
NOOTKA SOUND
ESTEVAN PT.
CLAYOQUOT SOUND
BARKLEY SOUND
CAPE BEALE
PACHENA PT.
CAPE FLATTERY
STRAIT OF JUAN DE FUCA
STRAIT OF GEORGIA
ZEBALLOS
CAMPBELL RIVER
COURTENAY
PORT ALBERNI
NANAIMO
LADYSMITH
DUNCAN
VICTORIA
PORT SAN JUAN
WESTVIEW
SECHELT
SQUAMISH
VANCOUVER
NEW WESTMINSTER
MISSION
BELLINGHAM
BRITISH COLUMBIA
U.S.A.
FOR ALL FISH CAUGHT OFF THE COAST OF THE STATE OF WASHINGTON SOUTH OF CAPE FLATTERY REPORT AS AREA "C"


MANAGEMENT DIVISIONS
FISHERIES & OCEANS
PACIFIC REGION
Fraser River
Northern B C
& Yukon
Division
North & Central
Coast Division
South Coast
Division
WHITEHORSE
PRINCE RUPERT
PRINCE GEORGE
RAMLOOPS
VANCOUVER
VICTORIA


YUKON SOUTH
ALSEK-TAKU
NORTHERN B.C.
UPPER NASS
HAZELTON
LOWER NASS
TERRACE
SMITHERS
SKEENA
PRINCE GEORGE
MASSET
QUEEN CHARLOTTE
SANDSPIT
PRINCE RUPERT
KITIMAT
QUESNEL
BELLA BELLA
BELLA COOLA
WILLIAMS LAKE
CLEARWATER
RIVERS INLET
SMITH INLET
SEYMOUR INLET
ALERT BAY
CAMPBELL RIVER
LILLOOET
KAMLOOPS
SALMON ARM
QUATSINO SOUND
KYUQUOT
TAHSIS
POWELL RIVER
SQUAMISH
PENDER HARBOUR
COMOX
MISSION
VAN
TOFINO
PORT ALBERNI
NANAIMO
CHILLIWACK
COQUITLAM
SURREY
STEVESTON
SOOKE
DUNCAN
VICTORIA
SAANICH
BRITISH COLUMBIA
FISHERIES & OCEANS - Pacific Region
WHITEHORSE DISTRICT
YUKON-ARCTIC
ALSEK-TAKU
YUKON SOUTH
NORTHERN B.C.
LEGEND
DISTRICT BOUNDARY
SUBDISTRICT BOUNDARY
VANCOUVER
COQUITLAM
MISSION
STEVESTON
SURREY
CHILLIWACK

STANDARDS USED ON STREAM DATA PAGE

Name of Stream: Name given in Gazetteer of Canada, British Columbia, 1985, third edition.

Local names are in lower case and enclosed in brackets.

Statistical Area: As defined by D.F.O., showing areas of catch for B.C.Waters (Map dated Jan. 1974)

Districts and Subdistricts: As defined by D.F.O.(Map 1985)

RAB Numbers: The Aquatics Unit of the Resource Analysis Branch, Ministry of the Environment have assigned a hierarchical coding system (RAB number) to drainage basins of British Columbia. RAB numbers classify catchment areas and river channels. Further information on RAB coding system can be found in "A Hierarchical Watershed Coding System for British Columbia", RAB Technical Paper #3, Ministry of the Environment, Victoria, B.C. June 1980.

Geographic Co-ordinate Reference: The geographic co-ordinates given indicate the centre of each feature, except for streams, where the position of the mouth is given. The geographic co-ordinates are to the nearest minute.

Length: The portion of the stream accessible to spawning salmon.

Drainage: Area in square kilometers of the entire drainage basin feeding the stream.

Discharge: Extremes of maximum and minimum daily discharge for the period of the last 30 years. Discharge date is taken from "Historical Stream Flow Summary", British Columbia, Water Survey of Canada.

Temperature: As described (^{o}C)

Barriers and Points of difficult ascent: Complete and partial barriers to salmon and their distance from the stream mouth. Species likely to be affected may be listed. Both natural and man-made obstructions are defined.

Spawning distribution:
Portion of the stream utilized by each species. Distribution is indicated by brief comments opposite the species.

General remarks: Emphasizes features of stream and spawning populations. Also includes industrial activity, routes of accessibility, etc. The comments and dates are taken from "Annual Reports of Salmon Streams and Spawning Grounds". In some cases, references to additional information not included in the General remarks may be given.

Escapement Records: The escapement represents the mid point of the coded range of escapement for each species. For example: the letter "H" representing 5000-10000 fish would be entered as 7500. Where absolute numbers are provided by Fisheries Personnel, these numbers are entered. N/O means the stream was inspected, but no fish were observed; UNK means there was evidence of fish present, but no estimates were made; NO RECORDS means no escapement records for the applicable years could be found in the escapement files.

Timing: Dates which salmon arrive in the stream, begin to spawn, reach peak spawning period and finish spawning.

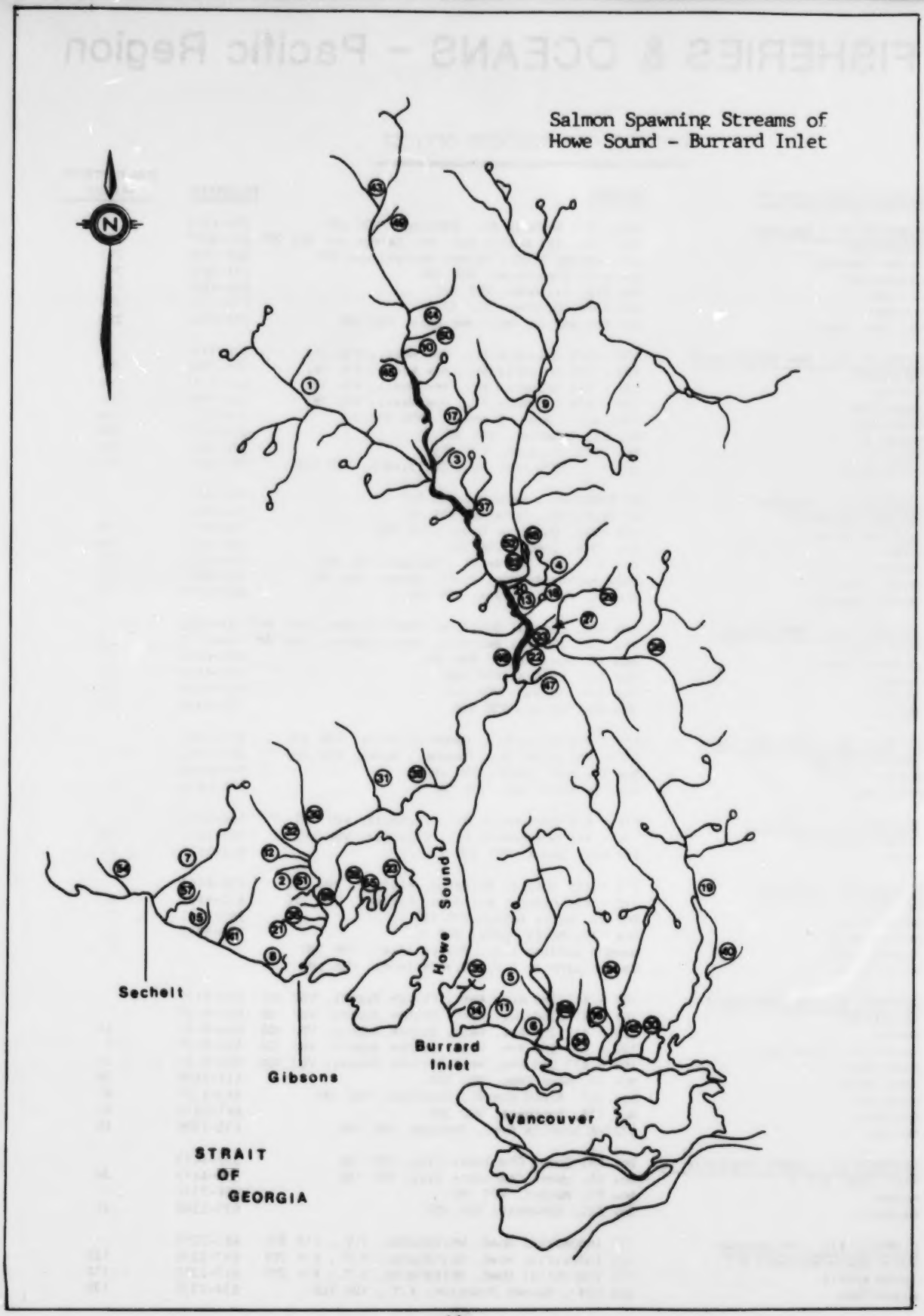
E = early (1st to 10th of the month)
M = mid (11th to 20th of the month)
L = late (21st to end of the month)

NB: Distance references are from the mouth of the stream unless otherwise stated.

FISHERIES & OCEANS - Pacific Region

DISTRICT/SUB-DISTRICT OFFICES

DISTRICT/SUB-DISTRICT	ADDRESS	TELEPHONE	SUB-DISTRICT NUMBER
DISTRICT #1 - Kamloops	202 - 317 Seymour St., Kamloops, V2C 2E9	374-4322	
Salmon Arm	Box 1160, 461 Beatty Ave. NW, Salmon Arm V0E 2T0	832-8037	29K
Prince George	2392 Ospika Blvd., Prince George, V2N 3N5	564-7030	29J
Clearwater	Box 610, Clearwater, V0E 1N0	674-2633	29C
Lillooet	Box 315, Lillooet, V0K 1V0	256-4525	29F
Quesnel	Box 4340, Quesnel, V2J 3J3	992-2434	29H
Williams Lake	540 Borland St, Williams Lake, V2G 1R9	398-6544	29G
DISTRICT #2 - New Westminster	309 - 549 Columbia St., New West., V3L 1B3	524-7181	
Vancouver	309 - 549 Columbia St., New West., V3L 1B3	524-7306	28A
Surrey	309 - 549 Columbia St., New West., V3L 1B3	524-7171	29B
Coquitlam	309 - 549 Columbia St., New West., V3L 1B3	524-7169	29C
Steveston	1255 No. 1 Road, Richmond, V7E 1T7	274-7217	29A
Squamish	Box 85, Squamish, V0N 3G0	892-3230	28B
Mission	Box 3308, Mission, V2V 4J5	826-3664	29D
Chilliwack	Suite 5, 9375 Mary St., Chilliwack, V2P 4G9	792-6011	29E
DISTRICT #3 - Nanaimo	60 Front St., Nanaimo, V9R 5H7	754-3257	
Nanaimo/Ladysmith	60 Front St., Nanaimo, V9R 5H7	754-3257	17
Qualicum Beach	Box 1270, Qualicum Beach, V0R 2T0	752-9712	14S
Comox	Box 1328, Comox, V9N 3J0	339-2031	14N
Duncan	Box 241, 191 Ingram St., Duncan, V0L 3X3	746-6221	18
Powell River	4488 Marine Avenue, Powell River, V8A 2K2	485-9621	15
Pender Harbour	Box 10, Madeira Park, V0N 2H0	883-2313	16
DISTRICT #4 - Port Alberni	Box 280, Federal Building, Port Alberni, V9Y 7M7	724-0195	
Port Alberni	Box 280, Federal Building, Port Alberni, V9Y 7M7	724-0195	23
Quatsino Sound	Box 10, Port Hardy, V0N 2P0	949-6422	27
Kyuquot	Box 549, Tahsis, V0P 1X0	934-6606	26
Tahsis	Box 549, Tahsis, V0P 1X0	934-6606	25
Tofino	Box 48, Tofino, V0R 2Z0	725-3468	24
DISTRICT #5 - Campbell River	215 - 950 Alder St., Campbell River, V0N 2P8	287-2102	
Campbell River	215 - 950 Alder St., Campbell River, V0N 2P8	287-2102	13
Seymour Inlet	Box 10, Port Hardy, V0N 2P0	949-6422	11
Alert Bay	Box 10, Alert Bay, V0N 1A0	974-5216	12
DISTRICT #6 - Victoria	116 - 816 Government St., Victoria, V8W 1W9	566-3252	
Victoria/Saanich	116 - 816 Government St., Victoria, V8W 1W9	566-3252	19
Sooke	Box 460, Sooke, V0S 1N0	642-5322	20
DISTRICT #7 - Kitimat	315 - 450 Federal Building, Kitimat, V8C 1T6	632-4884	
Butedale	315 - 450 Federal Building, Kitimat, V8C 1T6	632-4884	6
Bella Bella	Box 38, Bella Bella, V0T 1B0	957-2363	7
Bella Coola	Box 130, Bella Coola, V0T 1C0	799-5345	8
Rivers Inlet	Dawson Landing P.O., Rivers Inlet, V0N 1M0		9
Smith Inlet	Dawson Landing P.O., Rivers Inlet, V0N 1M0		10
DISTRICT #8 - Prince Rupert	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	
Waterfront	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	
Skeena	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	4A
Grenville - Principe	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	5
Lower Nass	109 - 417 2nd Ave. West, Prince Rupert, V8J 1G8	624-9137	3A
Upper Nass	Box 29, Nass Camp, V0J 3J0	633-2408	3B
Hazelton	Box 327, Field Street, Hazelton, V0J 1Y0	842-6327	4C
Smithers	Box 578, Smithers, V0J 2N0	847-2312	4D
Terrace	4721-B Lazelle Ave., Terrace, V8G 1R6	635-2206	4B
DISTRICT #9 - Queen Charlotte Is.	Box 99, Queen Charlotte City, V0T 1S0	559-4413	
West Coast Q.C.I.	Box 99, Queen Charlotte City, V0T 1S0	559-4413	2W
Masset	Box 99, Masset, V0T 1M0	626-3316	1
Sandspit	Box 222, Sandspit, V0T 1T0	637-5340	2E
DISTRICT #10 - Whitehorse	122 Industrial Road, Whitehorse, Y.T., Y1A 2T9	667-2235	
Yukon South/Northern B.C.	122 Industrial Road, Whitehorse, Y.T., Y1A 2T9	667-2235	120
Yukon-Arctic	122 Industrial Road, Whitehorse, Y.T., Y1A 2T9	667-2235	110
Alsek-Taku	Box 5341, Haines Junction, Y.T., Y0B 1L0	634-2235	130


Salmon Spawning Streams of
Howe Sound - Burrard Inlet
N
Howe Sound
Sechelt
Gibsons
Burrard
Inlet
Vancouver
STRAIT
OF
GEORGIA

INDEX TO MAP OF SPAWNING STREAMS OF STATISTICAL AREA 29

HOWE SOUND - BURRARD INLET

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2. (Avalon Creek)
3. (Branch 100 Creek)
4. BROHM RIVER
5. BROTHERS RIVER
6. CAPILANO RIVER
7. CHAPMAN CREEK (Mission Creek)
8. CHASTER CREEK (Gower Creek)
9. CHEAKAMUS RIVER
10. (Chuck-Chuck Creek)
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34. MOSQUITO CREEK
35. NELSON CREEK
36. OUILLET CREEK (Jap Creek, Oulette Cr.)
37. PILLCHUCK CREEK (Pilchuck Creek)
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48. (Tenderfoot Creek)
49. (Thirty Seven Mile Creek)
50. (Twenty Eight Mile Creek)
51. (Twin Creek, Archies Creek)
52. (Upper Paradise Channel)
53. (Lower Paradise Channel)
54. WAKEFIELD CREEK
55. (West Bay Creek)
56. (Williamson Creek)
57. WILSON CREEK

SUMMARY

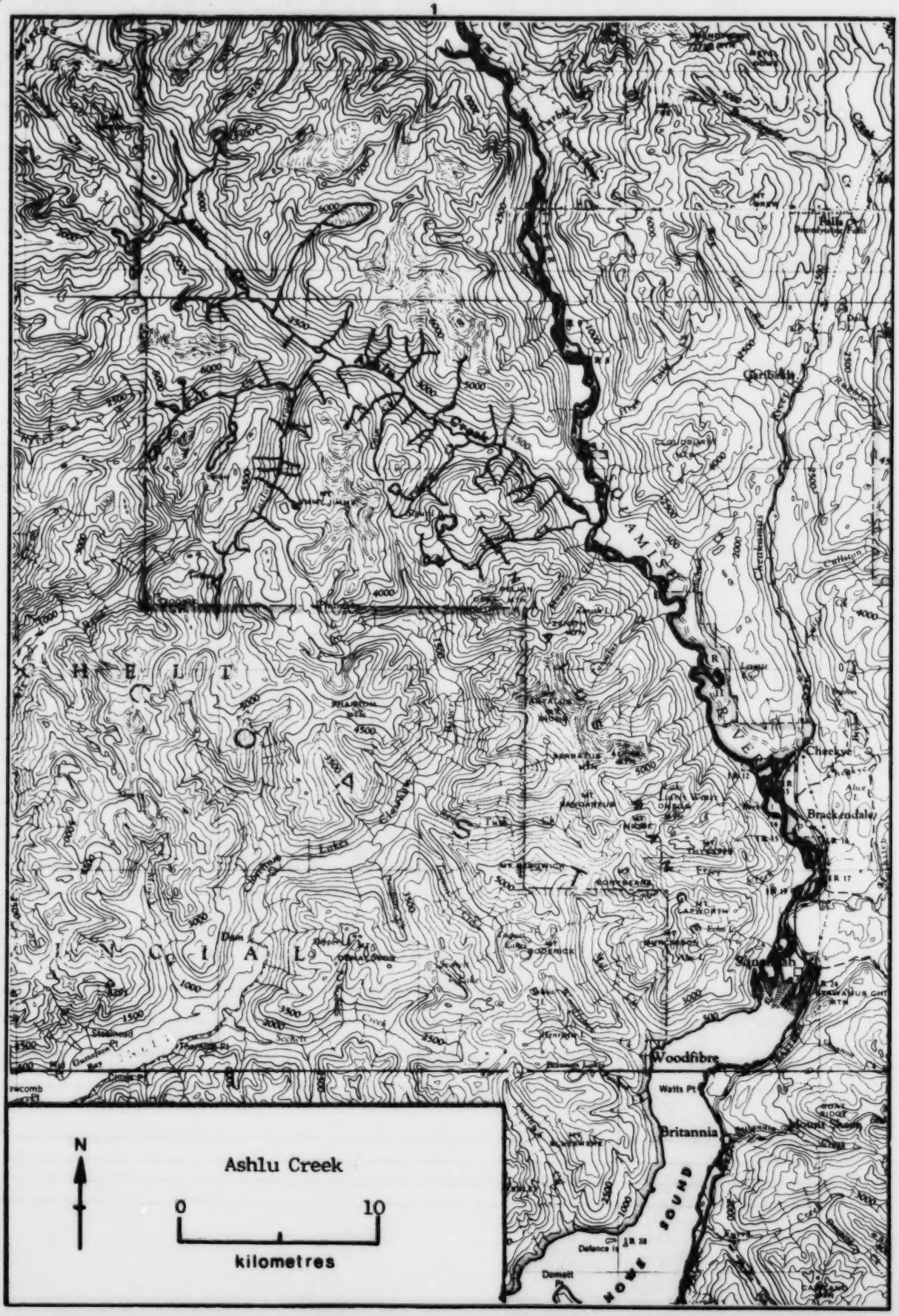
ESCAPEMENT RECORD FOR STATISTICAL AREA 28 HOWE SOUND - BURRARD INLET

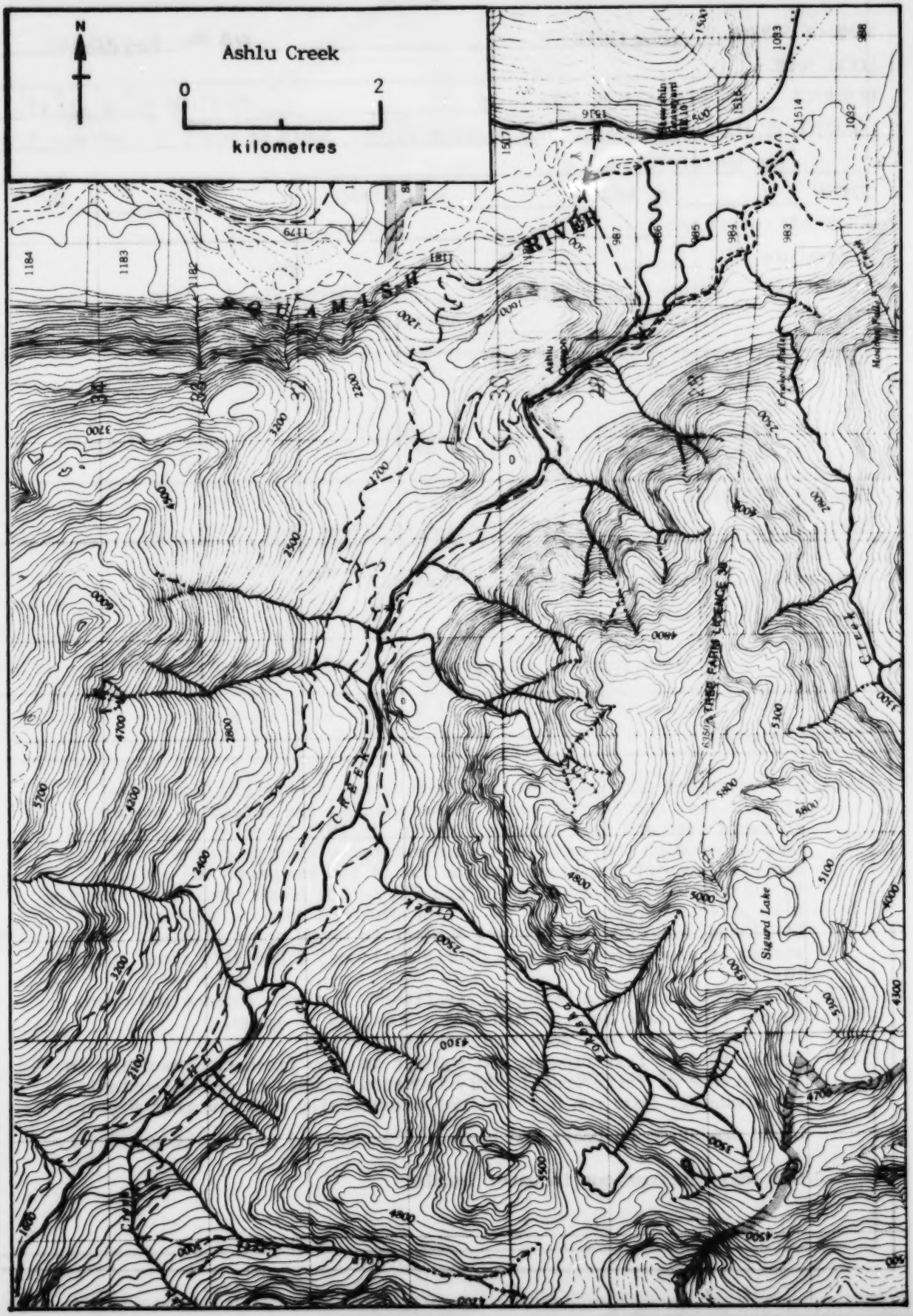
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
47	25	15625	11025	62275	519575	17875
48		15500	93000	102550	25	17500
49	25	15500	17300	52500	299850	37400
50		15625	13125	52725	25	18550
51		15975	97575	98775	304625	18225
52		15500	103450	240875	150	41750
53		18900	13250	23250	201725	10175
54		16700	45700	67150	300	18900
55	4	15975	31998	30510	192550	18045
56		15550	8540	14500		9165
57		19100	51300	78875	237175	17445
58		18900	25820	87950		17275
59		17100	6175	158925	157125	8200
60		15550	17514	30450		10101
61		19100	50464	23700	452500	17661
62		18900	13686	54125		16622
63		9100	14721	44375	832625	8947
64		7575	57097	39225		17836
65		35750	18750	13350	110800	16350
66		18900	15750	26750	75	9450
67		6900	20425	46675	47000	12325
68		10600	18025	125650		14300
69	25	24800	14550	70000	32100	10275
70	25	31000	37825	132025		8675
71	25	11279	38300	45990	59325	5081
72		9488	11915	364745	757	23341
73	12	14015	30850	277247	173300	19981
74		9343	146375	155200		22181
75	75	4817	64997	71000	79000	17710
76	2	6008	35503	134644	300	10112
77	300	4170	14963	138675	25255	5750
78	297	1563	15754	123063	512	2980
79	12	5303	56804	37856	27226	5231
80	25	5794	43321	193522	400	7434
81	8	6126	43434	149072	55480	5746
82	30	4717	48057	158158		3320
83	419	4516	47007	113577	26574	1865
84	62	5191	45602	187118		1198
85						

TIMING

ARRIVE						
START						
PEAK						
END						

REMARK _____


N
Ashlu Creek
0
10
kilometres
Squamish
Woodfibre
Britannia
Howe Sound
Brackendale
Cheekye
Garibaldi
Watts Pt
Porteau
Furry Creek


N
Ashlu Creek
0
2
kilometres
SQUAMISH
RIVER
Ashlu
Creek
Sigurd Lake

NAME OF STREAM ASHLU CREEK RAB NO. 90-1300-140

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 54′ 123° 17′

LOCATION OF MOUTH Flows S.E. into Squamish River., North of mouth of Cheakamus River, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable rock falls at 3.2km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chinook	evenly distributed throughout
coho	" " "
steelhead	" " "
chum	" " "
	1984 reported all species observed downstream from bridge.

GENERAL REMARKS

1973 The watershed of this stream has been almost completely denuded by logging over the last 30 years, consequently, the stream is subject to rapid rise and fall in water levels. In 1973 flooding caused severe bank erosion on the south shore and extensive silting in the lower spawning area of the river. Approx 25% of the streambed was affected by silting. The stream also shifted 91m to the south. Extensive scouring also affected approx. 25 - 35% of the pink and chinook spawning area. Steelhead, coho and chinook are subject to heavy sport fishing. This stream is also prone to heavy debris buildups, especially along the bars.

1978 This creek supports a heavy sports fishery for both chinook and coho.

1980 Severe flood late Dec. Estimate 75 - 90% loss of spawn.

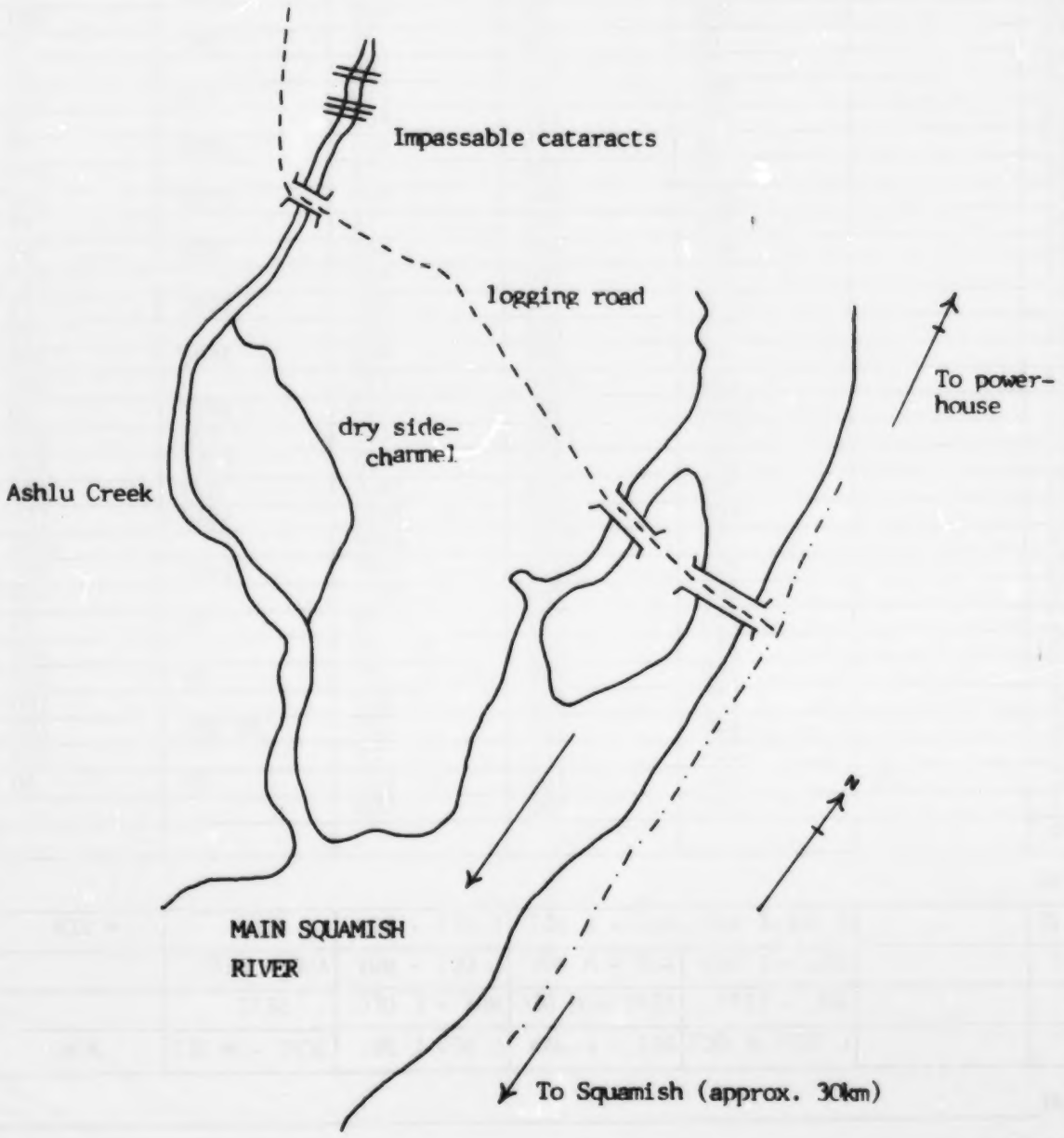
1982 Very high w/l in Dec. some scouring and debris.

1983 Stream is very fast flowing and subject to many freshets, resulting in a substrate of large gravel. Only isolated pockets of gravel suitable for spawning. Chum run has declined dramatically over the past 9 years.

Light predation by bears and birds. 1974 reported grizzly bear present.

Seasonal fluctuations in water levels.

Sketch of lower Ashlu Creek, 1968



ESCAPEMENT RECORD FOR ASHLU CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947		25	200	75	1500	200
48		25	400	750	N/O	200
49		25	25	400	1500	75
50		25	200	400		75
51		25	200	75	1500	200
52		25	1500	3500		400
53		200	400	400	1500	75
54		200	75	400		200
55		25	750	75	750	75
56		75	200	200		75
57		200	75	750	750	200
58		200	750	400		75
59		400	75	400	3500	75
60		75	200	75		200
61		200	UNK	750	2500	UNK
62		200	750	75		75
63		400	200	400	7000	50
64		100	700	400		100
65		1500	700	400	7000	75
66		200	200	100		50
67		200	200	400	3500	100
68		200	2000	700		100
69		2000	300	700	2000	50
70		1500	1500	400	N/O	150
71		300	700	400	5000	400
72		700	400	1500	N/O	400
73		600	600	7500	5500	150
74		750	3500	8000		1200
75		200	3500	1500	1500	400
76		400	750	3500		400
77		200	200	75	75	75
78	5	250	200	25		100
79		200	200	25	25	200
80		120	400	200		120
81		400	100	100	NO REC	150
82		200	75	25		100
83	25	150	100	N/O	50	50
84		250	400	400		
85						

TIMING

ARRIVE		E JUL-E AUG	AUG - L OCT	E OCT - NOV	AUG	M FEB
START		JUL - L AUG	AUG - M NOV	L OCT - NOV	AUG - SEPT	
PEAK		JUL - SEPT	SEPT - M DEC	NOV - E DEC	SEPT	
END		L SEPT-E OCT	OCT - E JAN	L NOV-L DEC	SEPT - M OCT	JUNE

REMARK

Avalon Creek see Dakota Creek P40

NAME OF STREAM (Avalon Creek) RAB NO. -

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°31′ 123°30′

LOCATION OF MOUTH Flows into Thornbrough Channel, S. of Dakota Cr.

LENGTH 1.6 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

gravel bar at mouth — passable at high flows

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- unknown
chum	- evenly distributed up to 200 yds

GENERAL REMARKS

1971 This stream flows into Thornbrough Channel near the site of a large log dumping and sorting area. It is short and the water disappears underground about 1.6km from mouth. It has several short stretches where very good spawning conditions exist. Could support up to 1000+ chum.

1976 This minor stream has been subjected to severe abuse by the Rivtow development at the mouth.

1980 Low water levels in early Oct.resulted in stream going underground near mouth. High flows in December caused scouring and some erosion.

1981/82 If an enhancement box were to be put on the stream, I would recommend that a cat be brought in to move the gravel bar so that fish can get up creek at all flows.

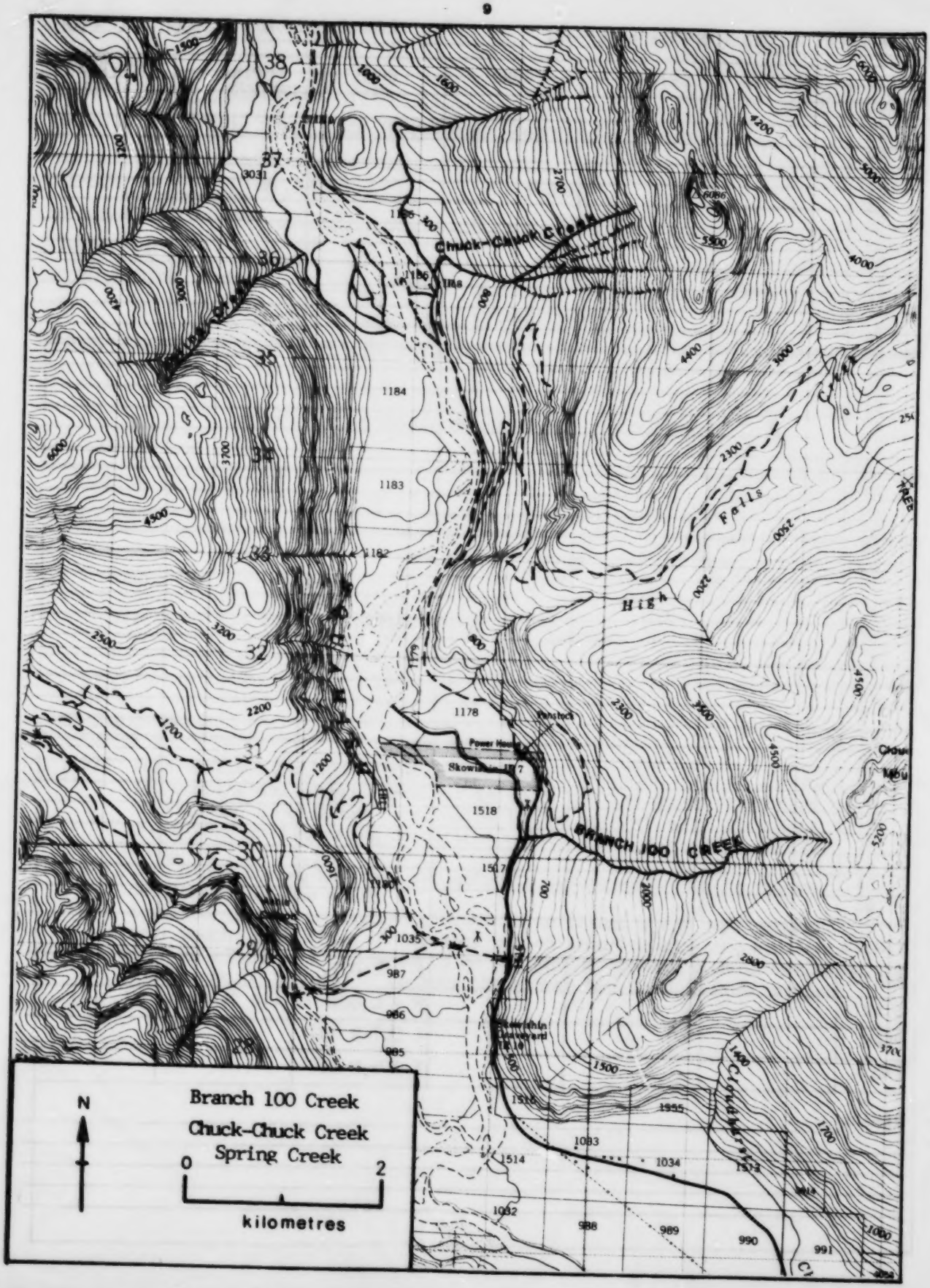
ESCAPEMENT RECORD FOR (Avalon Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71				75		
72				200		
73				200		
74				75		
75				25		
76				50		
77				-		
78				-		
79				N.O.		
80				N.O.		
81				N.O.		
82				N.O.		
83				N.I.		
84				N.O.		
85						

TIMING

ARRIVE				E - M OCT		
START				M - L OCT		
PEAK				L OCT-M NOV		
END				E NOV-M DEC		

REMARK


Chuck-Chuck Creek
BRANCH 100 CREEK
High
Falls
Penstock
Power House
Skowin
Branch 100 Creek
Chuck-Chuck Creek
Spring Creek
N
0
2
kilometres

NAME OF STREAM (Branch 100) RAB NO. -

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°56′ 123°18′

LOCATION OF MOUTH Flows W. into Squamish River near Skaweskin Indian Reserve 7

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable rock falls at 250 - 300 yds from mouth

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- in upper and lower reaches

GENERAL REMARKS

1979 Previously included with Squamish River salmon counts
1980 Flood conditions late December -- estimated losses of 50% spawners. Erosion and silting during flood.
1983 Will always be a low production stream given its general characteristics.

Water levels normal throughout most of year -- frequent high water early October to late December

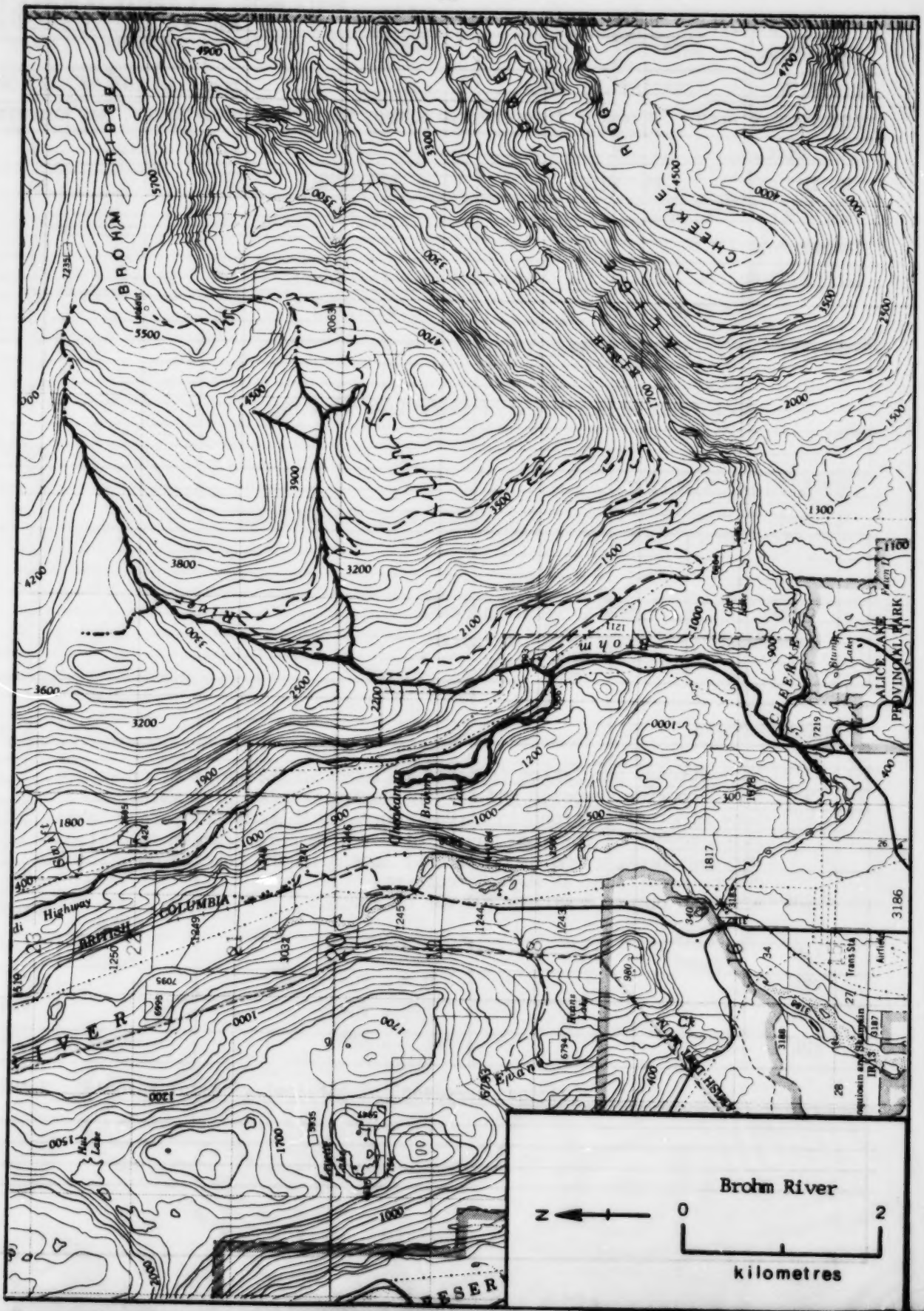
ESCAPEMENT RECORD FOR (Branch 100 Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			25			
80		25				
81			25			
82			25			
83			10			
84			30			
85						

TIMING

ARRIVE		OCT	OCT			
START		NOV	NOV - DEC			
PEAK		L NOV	L NOV-E JAN			
END		M DEC	M DEC-M JAN			

REMARK


Brohm River
N
0
2
kilometres
BROHM RIDGE
CHEEKEYE
RIDGE
RIVER
COLUMBIA
BRITISH
Highway
ALICE LAKE
PROVINCIAL PARK
CHAERT
Brohm
Lake
Ck

NAME OF STREAM BROHM RIVER RAB NO. 90-1300-050-010-010

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°48′ 123°08′

LOCATION OF MOUTH Flows S. into Cheekye River, E. of Cheakamus River, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^{o}C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Rock falls at North end of Brohm Lake at 4.8km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- scattered throughout
steelhead	- scattered throughout

GENERAL REMARKS

1979 This streams population formerly included in Cheakamus River counts.
1981 Some scouring, erosion and silting during October high water.
1983 Some minor alterations in stream course by Highway Dept. near lake. Stock movements upstream may be hindered by harsh stream conditions between Cheekeye and Brohm Creeks. Access to the lake is questionable due to conditions at Hwy. 99 culvert.
1984 All fish observed within 200 yds of mouth.

ESCAPEMENT RECORD FOR BROHM RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			75			25
80			150			50
81			50			35
82			50			30
83			20			40
84			25			
85						

TIMING

ARRIVE			OCT - E NOV			MAR
START			NOV - M DEC			APR
PEAK			NOV - DEC			MAY
END			DEC - E JAN			JUN

REMARK Figures formerly included in Cheakamus reports.

Brothers Creek
0
2
kilometres
N
Capilano
Lake
Cleveland Dam
Navvy Jack Point
Yacht Club
Ambleside Park
Lions Gate Bridge
Narrows
Gumboot Bank
Calamity Point
Golf Course
Sewage
Trans Sta
Shipyard
Marina
Rec Centre
Gem
Water
Hollyburn Ridge

NAME OF STREAM BROTHERS CREEK RAB NO. 90-0900-010

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 20′ 123° 08′

LOCATION OF MOUTH Flows S. into Capilano River, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable at .80km— stream narrow with large boulders

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- scattered
chum	- upper area from Keith Rd. to Hwy. 401

GENERAL REMARKS

1977 First report. Some problems encountered in protecting stream from fish molesting.Illegal gaffing.
1978 Water levels extremely low during the summer months.
1979 Erosion and silting 12 - 15%. Water levels extremely low during summer and fall. One half of normal yearly precipitation — flood mid.Dec.
1980 Water levels extremely low during Jun-Jul-Aug — high last week Oct.
1984 Low water during June to Oct. Predation by humans still a problem.

ESCAPEMENT RECORD FOR BROTHERS RIVER

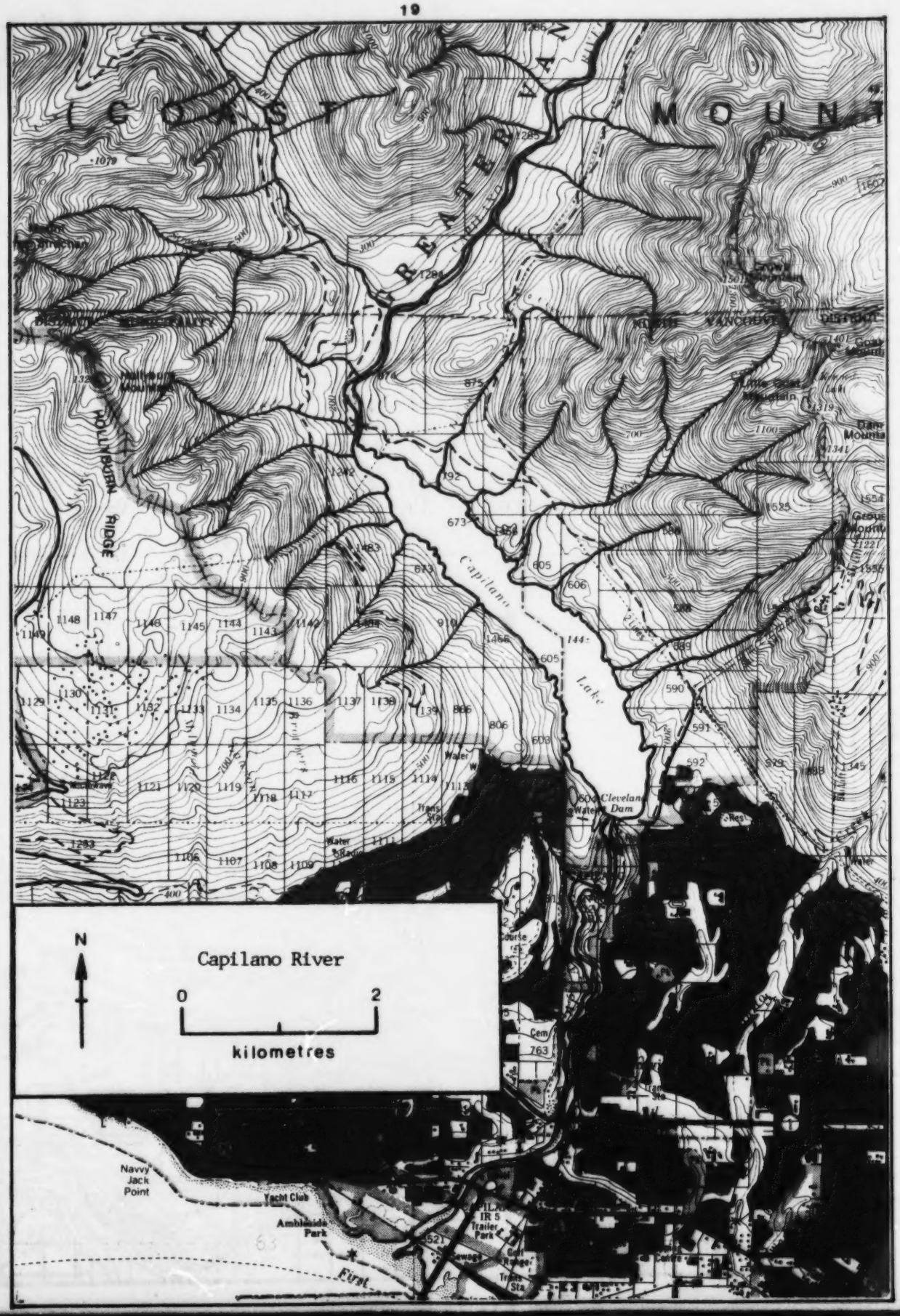
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77			12	55		
78			66	48		
79		13	54	38		
80		20	85	65		
81		12	110	160	35	10
82		18	194	56		6
83		27	186	124	64	
84		17	183	97		11
85						

TIMING

ARRIVE		E OCT	E OCT	L OCT	-	M DEC
START		M OCT	SEPT - L OCT	SEPT - L OCT	-	MAR
PEAK		-	SEPT - M NOV	OCT - M NOV	-	-
END		L OCT	DEC - E JAN	NOV - M DEC	-	APL

REMARK

N
Capilano River
0
10
kilometres
Woodfibre
Britannia
HOWE SOUND
Gambier Harbour
Bowyer
Horseshoe Bay
Snug Cove
Cotton Pt
Bowen Island
Seymour Landing
Caulfeild
Dundarave
West Vancouver
Point Atkinson
Point Grey
English Bay
BURRARD INLET
North Lonsdale
Lynn Creek
NORTH VANCOUVER
Dollarton
Lochdale
Burquitlam
VANCOUVER
WESTMINSTER
Queens
Anmore
Loco
Racoon
Roche Pt
Barry Pt
Ferguson Pt
Brockton Pt
Prospect Pt
Navvy Jack Pt
Point Atkinson
Point Grey
Point No
Tunstall Bay
Cape Roger Curtis
Point Cowan
Sherman
Queen
Charlotte Channel
Montagu Channel
Ramillies Channel
Defence Is
Watts Pt
Donnett Pt
Pam Rock
Christie Islet
Halkett Pt
Hutt Bay
Killarney Lake
Lookout Pt
White Cliff Pt
Eagle Harbour
Fire Tower
Dam
Mount Sheer
Mount Burnaby
Mount Seymour
Provincial
Indian Arm
Fraser River
Burnaby
Queens
Eburne
Sea Island
Pier
Prison
Dyer L
Fort
Mill
Ferry
Tsleil-Waututh
Capilano
Lynn Peaks
Seymour
Grouse Mtn
Cathedral Mtn
Mt Fromme
Mt Hollyburn
Mt Strachan
Mt Crown
Mt Elsay
Mt Elcee
Mt Manson
Mt Harvey
Mt Gardner
Mt Brunswick
Mt Defiance
Mt Artaban
Mt Anvil
Mt Bowyer
Mt Gambier
Mt Hotham
Mt Hunter
Mt Mullins
Mt Roberts
Mt Seymour
Mt Strachan
Mt Crown
Mt Elsay
Mt Elcee
Mt Manson
Mt Harvey
Mt Gardner
Mt Brunswick
Mt Defiance
Mt Artaban
Mt Anvil
Mt Bowyer
Mt Gambier
Mt Hotham
Mt Hunter
Mt Mullins
Mt Roberts
Mt Seymour
Lions
Hollyburn
Strachan
Crown
Elsay
Elcee
Manson
Harvey
Gardner
Brunswick
Defiance
Artaban
Anvil
Bowyer
Gambier
Hotham
Hunter
Mullins
Roberts


COAST MOUNTAINS
GREATER VANCOUVER
ROLLINSBURN RIDGE
Capilano
Lake
Cleveland Dam
Capilano River
N
0
2
kilometres
Navvy Jack Point
Yacht Club
Ambleside Park
IR 5 Trailer Park
First

NAME OF STREAM CAPILANO RIVER RAB NO. 90-0900

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°19' 123°08'

LOCATION OF MOUTH Flows S. into First Narrows, Burrard Inlet, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 360 Jan 15, 1961 MIN 1.10 Oct. 3, 1950

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Cleveland Dam, Greater Vancouver Water Board at 4.8km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chinook	- to hatchery
coho	- to hatchery, some trucked above the dam
chum	- lower reaches and Brothers Creek confluence
pink	- lower reaches
steelhead	- to hatchery, some trucked above the dam

GENERAL REMARKS

This stream is connected with the water supply system of greater Vancouver. In 1954, the construction of Cleveland Dam and the adjoining reservoir was completed. This impassable dam was overcome by constructing a fishway and facilities for trucking salmon above the dam. This equipment is still in operation.
The Capilano Hatchery was completed in 1972 and was constructed as part of a program to increase stocks of coho and chinook salmon and steelhead trout. Its yearly designed operating capacity is 1,000,000 coho smolts, 2 - 3,000,000 chinook smolts and 20-30,000 steelhead smolts.
1955/63 Fishway and facilities for trucking salmon above dam in operation.
1966 A steel mesh fence covering was put over the top of the holding pool at Dam site to stop the public from jigging for fish.
1968 Some rock work done above trapping facilities and below the dam. This should have the effect of permitting fry and yearlings a better chance to survive plunge over spillway of dam.
1969 Removal of gravel bars by G.V.W.B. for use as road gravel 3.2km above West Fork Bridge -- no damage to spawning areas.
1971 Hatchery in partial operation -- this stream subject to much abuse by general public and the salmon runs are often molested.
1973 Heavy poaching.
1976 120 chum lost to human predators.
1977 A good return of hatchery jacks.

continuation

CAPILANO RIVER

1979 Flooding in Dec. has probably decimated 50% of wild stocks.
1981 Squamish Indian Band By-law #10 is in effect on this system.
1982 50 chum lost to human molestation.

Predation: Merganzer and bear in upper reaches. Very heavy poaching in lower river and fish are molested by dogs and juveniles.

Seasonal fluctuations in water levels.

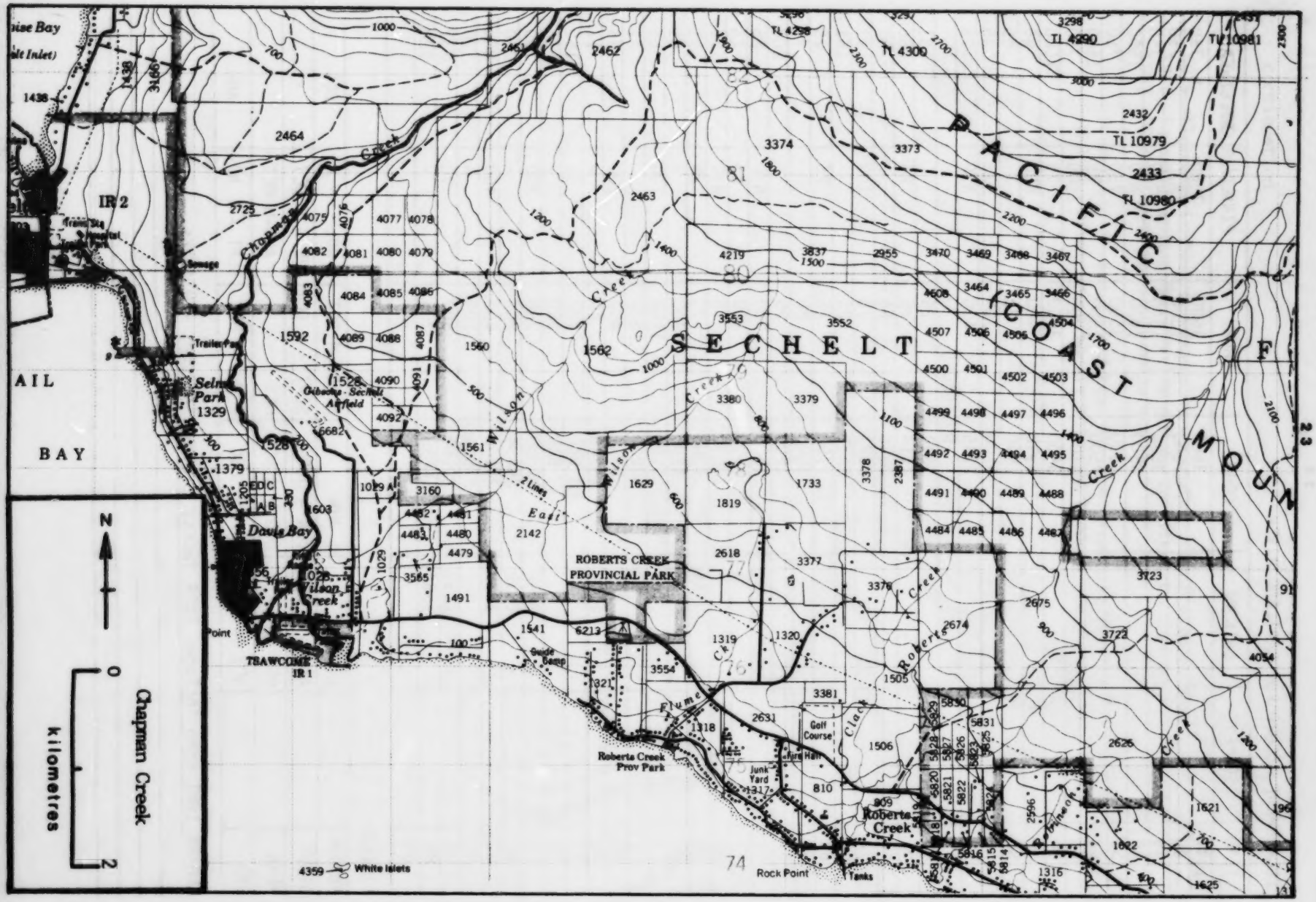
ESCAPEMENT RECORD FOR CAPILANO RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			3500	3500	7500	750
48			7500	1500	N/0	750
49			3500	1500	3500	750
50			3500	1500	N/0	1500
51			3500	3500	750	750
52			7500	1500	25	1500
53			3500	750	1500	750
54			3500	3500	75	1500
55	4		4998	400	400	95
56			1840	25		65
57			5100	200	75	95
58			3745	400	N/0	75
59			NO	RECORD		
60			3614	25		251
61			2114	25	25	86
62			2636	25		97
63			2071	75	100	97
64			2622	25		161
65			750	25	25	25
66			3500	25		75
67			1500	25		200
68			1500	200	N/0	25
69			1500	200	25	75
70			3500	75	N/0	75
71		44	4000	75	25	91
72		38	1200	700	7	91
73		165	1100	1100	150	56
74		93	40200	1500		31
75		767	6391	400	200	35
76	2	1102	25248	40	-	12
77		-	NO REC	120	30	150
78			500	250	-	35
79		3000	43000	280	200	100
80		2839	25434	200	-	250
81		1330	24100	400	450	200
82		463	27500	100	-	120
83	3	1133	20186	500	70	237
84		1694	16859	205	-	380
85						

TIMING

ARRIVE		E OCT	E JUN	E AUG-M OCT	L JUL	DEC
START		AUG - E OCT	JUN - JUL	SEPT - M OCT	JUL - E OCT	-
PEAK		OCT	AUG - M OCT	OCT	L AUG-M OCT	-
END		NOV	SEPT - DEC	E NOV - DEC	SEPT - E NOV	AUG

REMARK 1981 coho includes 2804 jacks, chinook includes 420 jacks.


SECHELT
PACIFIC
COAST
MOUN
ROBERTS CREEK
PROVINCIAL PARK
Selma
Park
Davis Bay
TRAWCOME
IR 1
IR 2
Chapman Creek
Wilson Creek
Roberts Creek
Roberts
Creek
Roberts Creek
Prov Park
Rock Point
Golf
Course
Junk
Yard
Tanks
Gibsons - Sechelt
Airfield
Trailer Park
Sewage
Point
White Islets
N
0
2
kilometres
AIL
BAY

NAME OF STREAM CHAPMAN CREEK RAB NO. 90-1600

LOCAL NAME (Mission Creek)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°26′ 123°43′

LOCATION OF MOUTH Flows S.W. into Str. of Georgia at Wilson Creek P.O., New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX 193 Oct. 13, 1962 MIN 0.034 Jul. 22, 1962

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable falls at 4.8km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	concentrated - in lower 1.2km, then scattered throughout
coho	- scattered

GENERAL REMARKS

This stream is the main water source for the Sunshine Coast Regional Water Board. Consumption of this water began in 1970 and will probably increase rapidly in the near future (1969-70)

1970 The Local Water District constructed a small dam near the falls.

1972 Heavy rains in July washed out most of the steelhead spawning site. Up to 50% of the chum spawn was lost during December because of a severe freshet.

1979 This creek is subject to flash flooding from the extensive logging operations in the upper watershed. There was no fishery in District #1 on chum this year resulting in four times the return from the '75 brood year.

1980 Flash flooding is becoming a problem to private property near the mouth and extensive rip-rap will have to be installed. Extensive scouring due to high Dec. floods.

1982 Poor assessment due to high water levels

Predation: mainly light, some jigging problems and fish molestation — juveniles trampling through reds near hwy. bridge (1980)

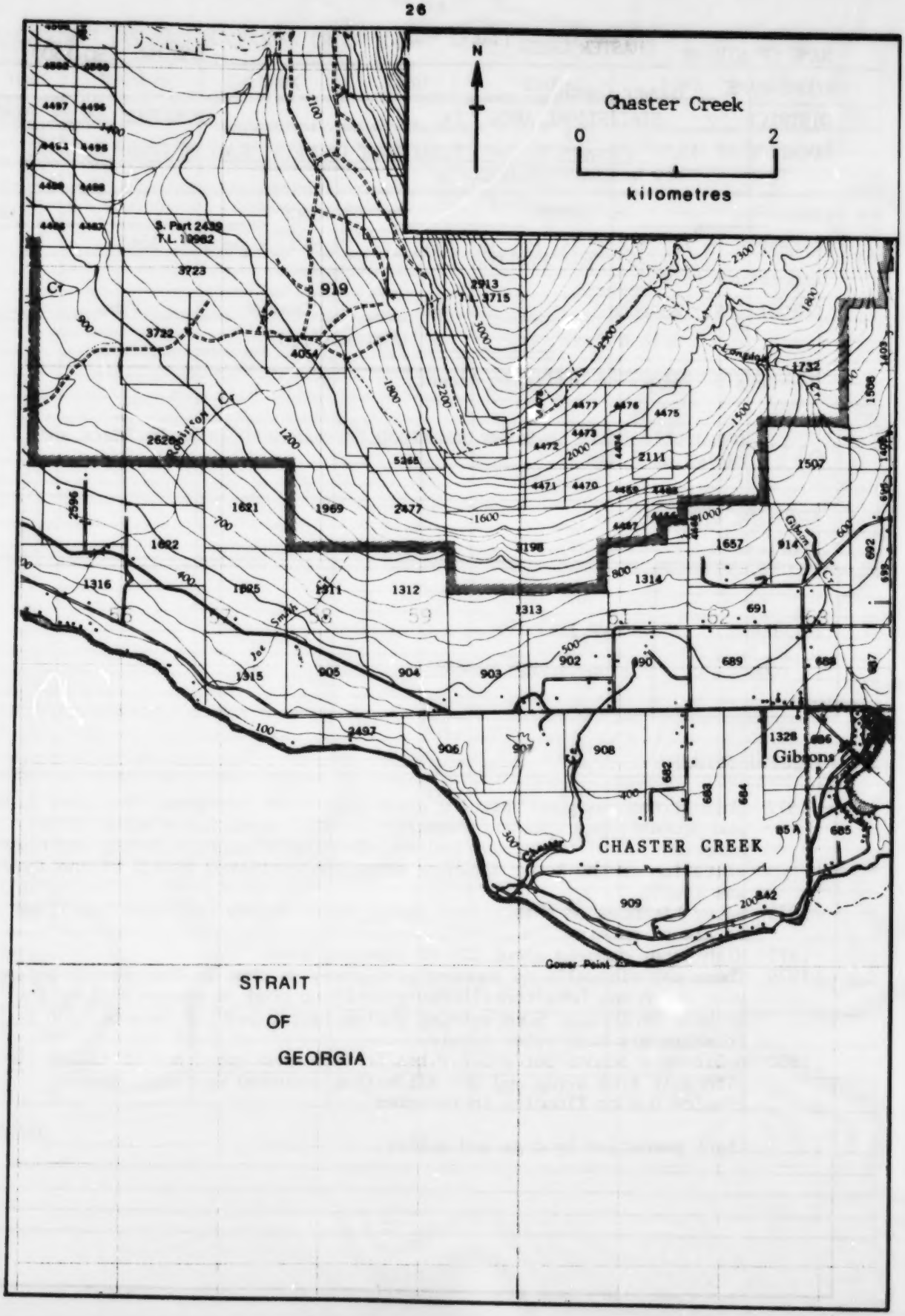
ESCAPEMENT RECORD FOR CHAPMAN CREEK (Mission Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			75	1500	750	75
48			25	750	25	25
49			200	1500	25	25
50			25	750	25	
51			75	1500	200	75
52			75	750	25	25
53						
54			NO	RECORDS FOR	1953 - 1964	
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65				50		
66				50		
67				100	50	
68				50		
69				200		
70				1500		
71				2200		40
72				3300		75
73				3500	100	200
74			75	3500		400
75			75	200	25	200
76			100	100		
77			UNK	2500		
78			75	400	12	
79			50	1200		
80			50	500		
81			25	600		
82			N.O.	20		
83			50	400		
84			50	200		
85						

TIMING

ARRIVE			E - M SEPT	E - M OCT	JUL	DEC
START			M - L SEPT	M OCT	JUL - L AUG	JAN
PEAK			E - L OCT	E - L NOV	AUG - SEPT	MAR
END			M NOV-E DEC	F - M DEC	SEPT	MAY

REMARK


N
Chaster Creek
0
2
kilometres
S. Part 2439
T.L. 19962
3723
919
2913
T.L. 3715
3722
4054
2626
5265
2111
1732
1507
1621
1969
2477
1657
914
1316
1825
1911
1312
1313
691
1315
905
904
903
902
690
689
2497
906
907
908
1328
Gibsons
CHASTER CREEK
909
842
Gower Point
STRAIT
OF
GEORGIA

NAME OF STREAM CHASTER CREEK RAB NO. 90-1500

LOCAL NAME (Gower Creek)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 23′ 123° 33′

LOCATION OF MOUTH Flows S.W. into Straits of Georgia, N.W. of Gower Pt., New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX 0.351 May 16, 1965 MIN 0 Aug. 2, 1965

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable falls at 4.8km and steep terrain with large boulders and rapids at 2.5km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- up to 1.6km
coho	- upstream to hwy.

GENERAL REMARKS

1972 This stream has good spawning areas scattered throughout the lower 2.4km and probably has spawning capacity for 1500 chum. Heavy rains in Dec. affected 70% of the stream bed -- extensive erosion, scouring and heavy siltation in the lower spawning areas. An estimated 60-80% of the spawn was lost.

1973 Water Licences on this stream reduce water supply in summer low flows to almost nothing.

1975 High water damaged about 30% of spawning area.

1979 There was virtually no commercial fishery on chum in District #1 this year which may have contributed greatly to good escapements along the Sechelt Peninsula. Some scoring during latter part of December due to extremely high water levels.

1980 A Gibson's school put a S.E.P.box in with chum eggs, but it filled with silt from a natural mud slide that occurred upstream. Severe erosion due to flooding in December.

Light predation by dogs and public.

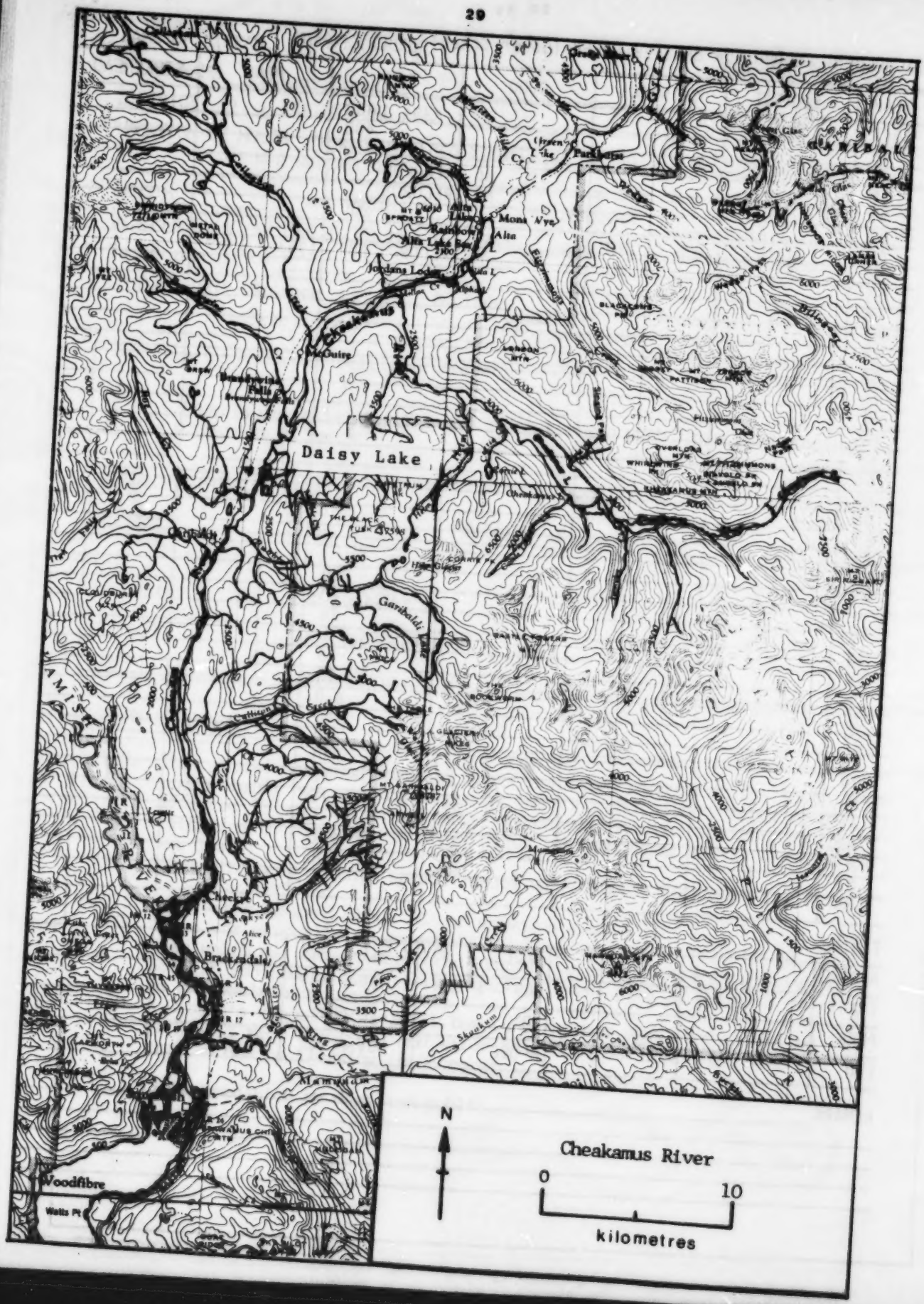
ESCAPEMENT RECORD FOR CHASTER CREEK (Gower Creek)

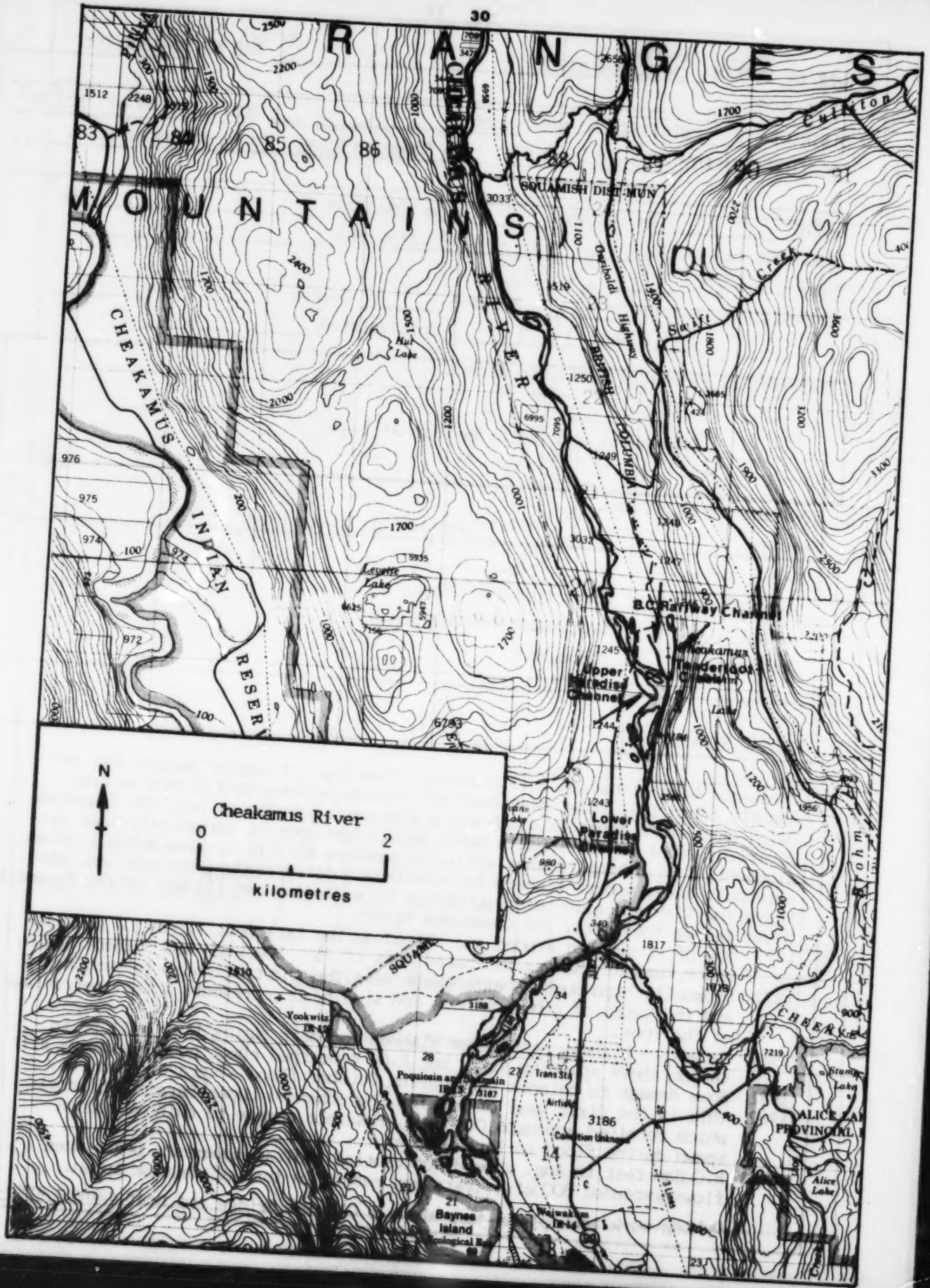
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947				400		
48				400		
49				750		
50			NO	RECORDS		
51			NO	RECORDS		
52				200		
53						
54			NO	RECORDS FOR	1953 - 1969	
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70				200		
71				20		
72				75		
73			NO	RECORDS		
74				75		
75			25	75		
76			N.O.	N.O.		
77				150		
78			10	50		
79			N.O.	230		
80				75		
81			30	75		
82			N.O.	6		
83			30	200		
84			25	500		
85						

TIMING

ARRIVE			SEPT - E NOV	M OCT-E NOV		
START			OCT - E NOV	L OCT-E NOV		
PEAK			NOV	E - L NOV		
END			M DEC	L NOV-M DEC		

REMARK


Daisy Lake
Garibaldi
Brackendale
Woodfibre
Cheakamus River
N
0
10
kilometres


RANGES
MOUNTAINS
SQUAMISH DIST-MUN
CHEAKAMUS INDIAN RESER
Cheakamus River
0
2
kilometres
N
Lower Paradise Channel
Upper Paradise Channel
B.C. Railway Channel
Cheakamus Canyon
Tenderfoot Creek
Levette Lake
Hut Lake
Alice Lake
Stump Lake
Baynes Island
Yookwitz IR-12
Pooziosin and Chamain IR-13
Trans Sta
Airfield
Collection Unknown
Squamish
Cheakamus
Brohm
Culliton
Creek
Highway
BRITISH COLUMBIA

NAME OF STREAM CHEAKAMUS RIVER RAB NO. 90-1300-050

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 47′ 123° 10′

LOCATION OF MOUTH Flows S. and S.W. into Squamish River, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable rock falls 9m high at 14km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chinook	- above Culliton Creek
chum	- from mouth to Culliton
coho	- throughout

GENERAL REMARKS

Cheakamus Lake elevation is 830 meters. Peak run-off occurs between May and August. Since 1957, flows have been affected by storage and diversion from Daisy Lake via a penstock discharging through a powerhouse into the Squamish River. The river is continually being encroached upon by stream-side land development, i.e. dyking, channelizing, diversions etc. It is also subject to an extremely heavy sports fishery for steelhead, dolly varden, chinook and coho. Migrating fish are also being subjected to an Indian net fishery on the Squamish River before they enter the Cheakamus River.

1975 35% of stream bed eroded and silted during late Oct. floods — several major channel changes. Estimated loss of 75 - 90% pink and chinook spawn.

1977 Unusually high numbers of sockeye seen. The sports fishery is very heavy and the catch of coho, chinook and steelhead represents a fair percentage of the runs.

1989 Extensive highway relocation planned for near future. Work will be in canyon above spawning area, but F.O. concerned about possible heavy silt.

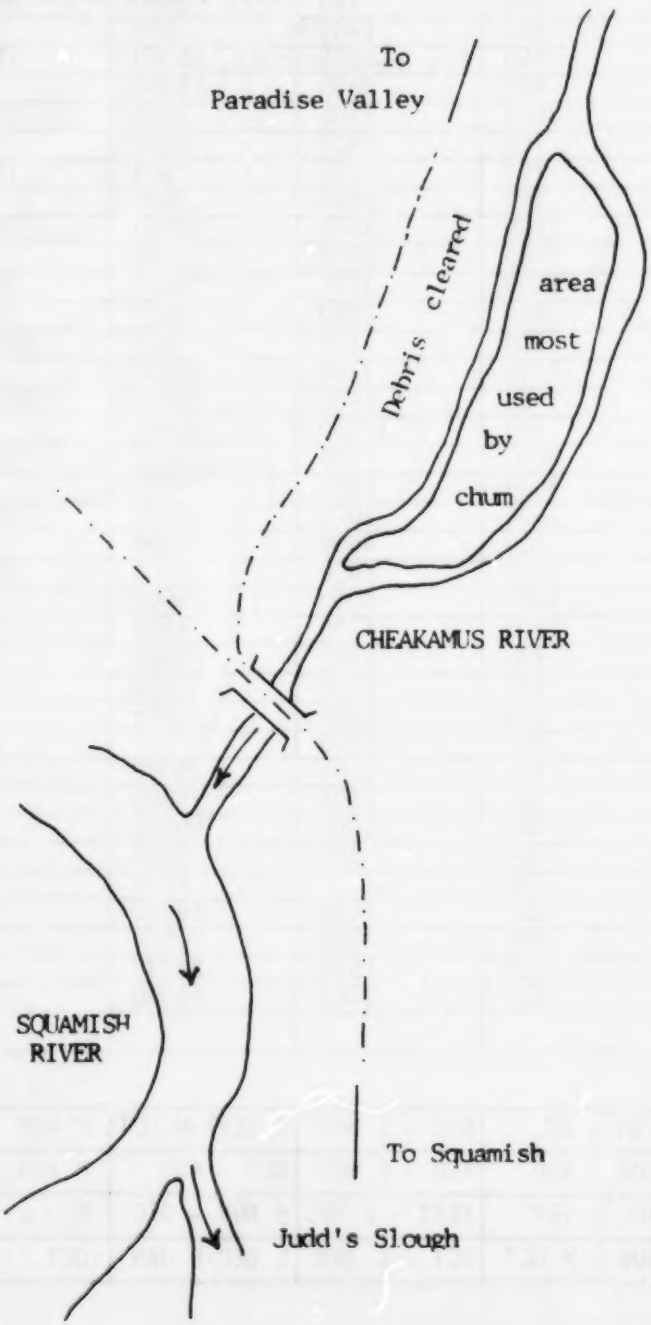
1981 Some damage to chinook eggs during October flood — gravel movement.

1982 This is the first year of use for the enhanced Upper Paradise Channel which received approx 6,000 chum. Possible damage to chinook salmon spawn during flood in late October.

1983 B.C.dam test in Aug. showed substantial bedload movements began when flows exceeded 8000cfs. Tests may result in loss of chinook spawn.

Dyking work took place just above B.C.Hydro Bridge and near canyon area.

Sketch of chum spawning area
on Cheakamus River, 1968



ESCAPEMENT RECORD FOR CHEAKAMUS RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947		400	400	3500	75000	400
48		400	1500	3500		400
49		400	750	3500	35000	400
50		400	1500	3500		400
51		750	3500	15000	15000	400
52		400	3500	15000		3500
53		3500	1500	3500	15000	400
54		750	1500	5000		750
55		750	1500	7500	15000	1500
56		400	1500	3500		400
57		3500	3500	35000	35000	750
58		3500	3500	35000		1500
59		1500	3500	75000	75000	400
60		400	1500	15000	UNK	750
61		3500	7500	9300	351700	1500
62		3500	3500	35000		400
63		1500	1500	30000	555000	750
64		400	15000	15000		1500
65		3500	7500	3500	35000	400
66		3500	1500	15000		750
67		1500	5000	20000	20000	1500
68		300	4000	30000		3000
69		2000	2000	20000	12000	1000
70		3000	6000	25000	N/0	1500
71		2200	4500	4500	2200	1200
72		400	1500	60000		2500
73		300	4000	50000	25000	3000
74		400	15000	35000		3500
75		200	15000	7500	3500	1500
76		400	1500	15000	-	1500
77	200	200	1500	75000	750	1500
78	100	150	1500	60000	500	1000
79		200	200	7500	400	750
80		200		7500	400	750
81		800	2500	40000	3000	1200
82	30	200	1500	20000		1200
83	25	100	1500	20000	75	250
84	N.0.	400	1500	50000	-	UNK
85						

TIMING

ARRIVE		JUN - JUL	AUG - L NOV	M SEPT-M OCT	E AUG	DEC
START		JUN - AUG	AUG - E DEC	OCT - NOV	M AUG	
PEAK		JUL - SEPT	SEPT - L DEC	M NOV - DEC	E - L SEPT	
END		AUG - M OCT	OCT - L JAN	L DEC-E JAN	OCT	JUN

REMARK

Chuck-Chuck Creek

see
Branch 100 Creek p.9

NAME OF STREAM (Chuk-Chuk Creek) RAB NO. 90-1300-160

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°56′ 123°19′

LOCATION OF MOUTH Flows S. into Squamish River, N. of High Falls Creek

LENGTH 2.4 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^oC)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chinook	- over lower 100 yds
coho	- throughout

GENERAL REMARKS

1979 Figures previously included in Squamish River populations.
1980 Flood conditions in late December -- coho and chinook spawning areas probably alright, but the chum spawning area is badly silted.
1981 This creek breaks up into several small streams at 2.4km.
1983 No indication of chum spawning at all this year. Also no evidence of pinks. Heavy silt load in bottom portion of stream may be result of relative closeness to Weldwood T.F.L.mainline haul road.
1984 Enumeration estimate for chinook is from S.E.P.personnel who surveyed the area for broodstock.

Physical condition: 1983 Bottom portion of stream has heavy silt load over gravel substrate which is common in this stream.

ESCAPEMENT RECORD FOR (Chuk-Chuk Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			25		25	25
80		15	40	25		25
81		10	40	20		25
82		20	30	25		
83		5	50			
84						
85						

TIMING

ARRIVE		M AUG	SEPT	SEPT		APL
START		L AUG-E SEPT	E - M OCT	OCT		MAY
PEAK		M - L SEPT	OCT - NOV	NOV		MAY - JUN
END		E - M OCT	L - M DEC	DEC		JUN

REMARK Figures previously included in Squamish River Report

Cypress Creek
N
0
2
kilometres
HOWYUMBURN RIDGE
Capilano
Sunset Beach
Tree Point
Eagle Island
Erwin Point
Grebe Islets
Indian Bight
Point Atkinson
Atkinson Lighthouse
LIGHTHOUSE PARK
Fisherman's Cove
Batchelor Point
Kettle Point
Bird Islets
Glenesgles
Cliff Point
Lookout Point
CHANNEL

NAME OF STREAM CYPRESS CREEK RAB NO. 90-0970

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°20' 123°15'

LOCATION OF MOUTH Flows S. into Burrard Inlet, N.E. of Point Atkinson, New West.Dist.

LENGTH .40 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^oC)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- below Keith Road

GENERAL REMARKS

First report 1981.

1981 10% erosion and silting — low w/l in September, flood in Oct.
1983 Early November floods
1984 Water levels low June - October, 1981/82 floods and continuous maintainance on lower portion of spawning area affected this stream.

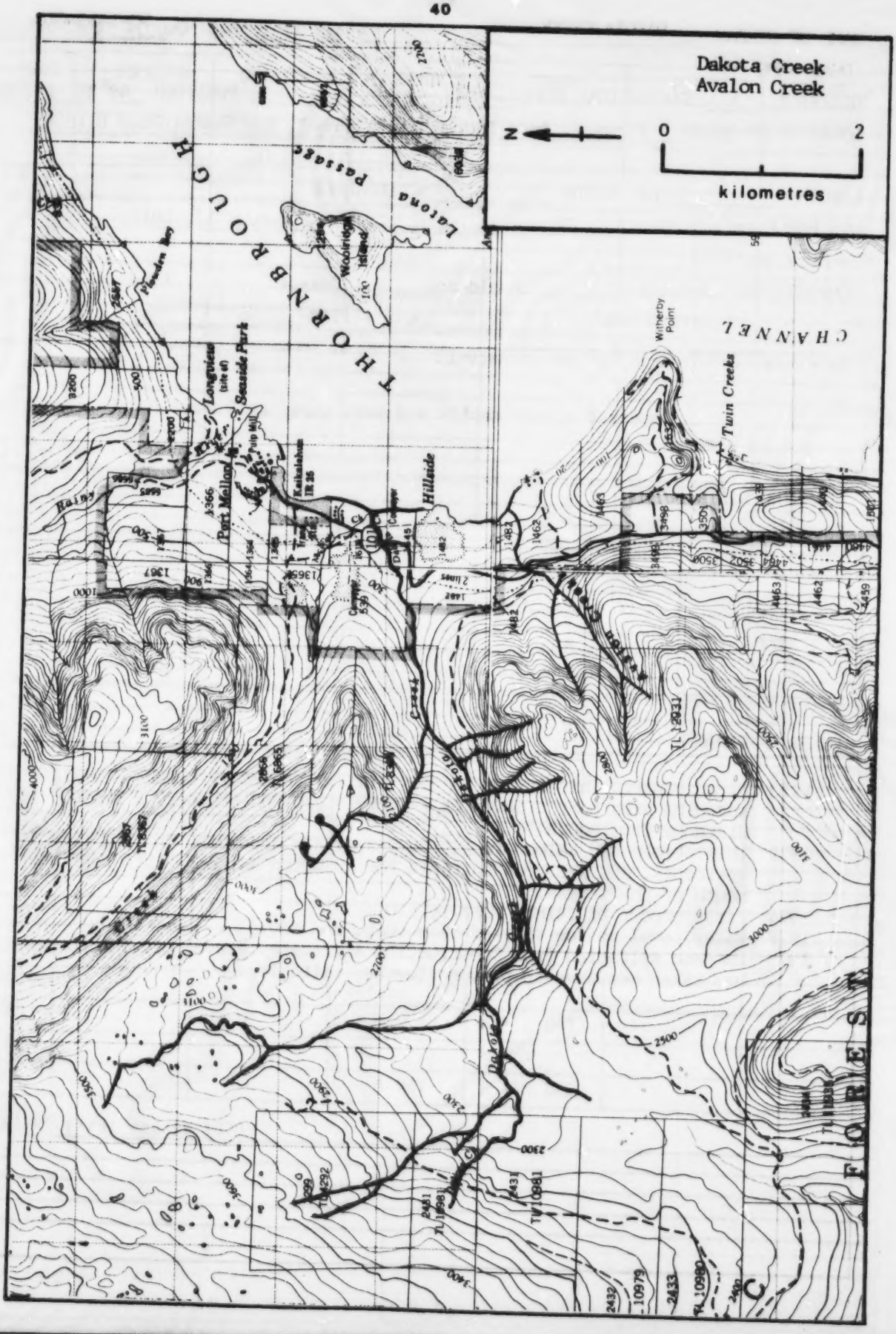
ESCAPEMENT RECORD FOR CYPRESS CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81			12			
82			N.O.			
83			2	N/O		
84			N.O.			
85						

TIMING

ARRIVE						
START						
PEAK						
END						

REMARK


Dakota Creek
Avalon Creek
N
0
2
kilometres
THORNBROUGH
CHANNEL
Passage
Lafona
Woolridge Island
Witherby Point
Twin Creeks
Longview
Seaside Park
Port Mellon
Pulp Mill
Kakalahuk IR 25
Hillside
Rainy
Dakota Creek
Avalon Creek
FOREST

NAME OF STREAM DAKOTA CREEK RAB NO. 90-1430-010

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 31′ 123° 30′

LOCATION OF MOUTH Flows E. into Thornbrough Channel, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX - MIN 0 Aug. 17, 1951

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable rock rapids and very steep at 3.2km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- at mouth of Dakota Creek
chum	- " "

GENERAL REMARKS

1970 First report. This stream is very similar to McNair Creek — small spawning area near tide water — very steep and bouldery a short distance from mouth.

1971 This stream had salmon runs some years back according to long time residents. A short area suitable for spawning salmon exists near the mouth of the stream.

1974 First report of salmon seen by F.O.

1978 Water level up for time of year (Oct. and Nov.)

1979 Extreme siltation from Construction Aggregates gravel pit.The company has taken measures to prevent further siltation.

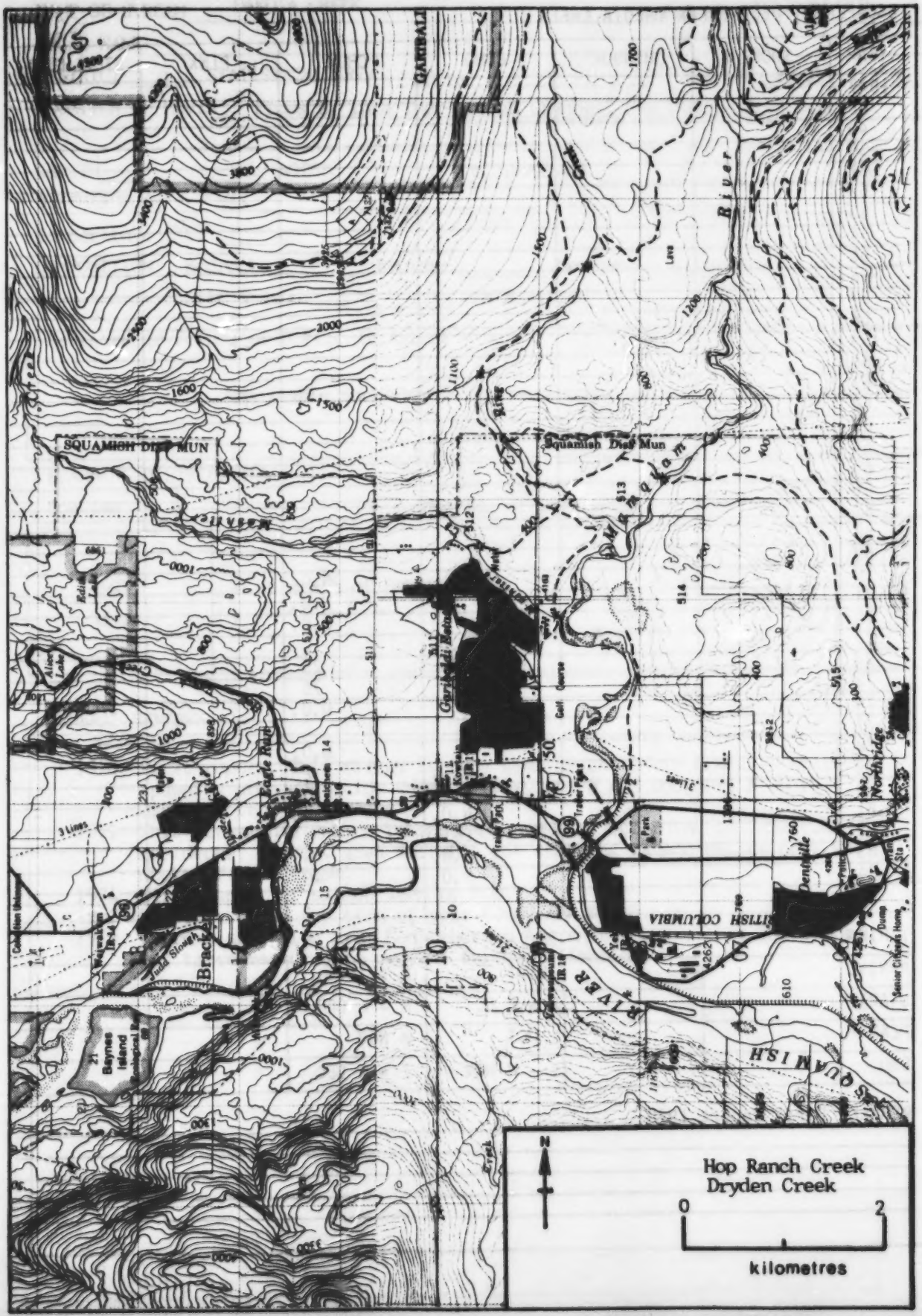
ESCAPEMENT RECORD FOR DAKOTA CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71				N.O.		
72				N.O.		
73				N.O.		
74			N.O.			N.O.
75			25	25		
76			6	75		
77				N.O.		
78						
79				N.O.		
80			N.O.	2		
81			N.O.	N.O.		
82			N.O.	N.O.		
83			NOT INSPECTED			
84			N.O.	6		
85			N.O.	40		

TIMING

ARRIVE			SEPT	M OCT		
START			E - M OCT	M - L OCT		
PEAK			L OCT	M NOV		
END			L - M NOV	E - M DEC		

REMARK First report 1970


Hop Ranch Creek
Dryden Creek
0
2
kilometres
N
SQUAMISH DIST MUN
Squamish Dist Mun
QARIBALDI
River
Eagle Road
Brackendale
Baynes Island Ecological Reserve
Judd Slough
Northridge
RIVER
SQUAMISH

NAME OF STREAM DRYDEN CREEK RAB NO. -

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°45′ 123°08′

LOCATION OF MOUTH Flows S. into Hop Ranch Creek, New West. Dist.

LENGTH 1.6 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	unknown

GENERAL REMARKS

1984 Most of the substrate in this system is made up of fines and survival is thought to be low. Normal water levels.

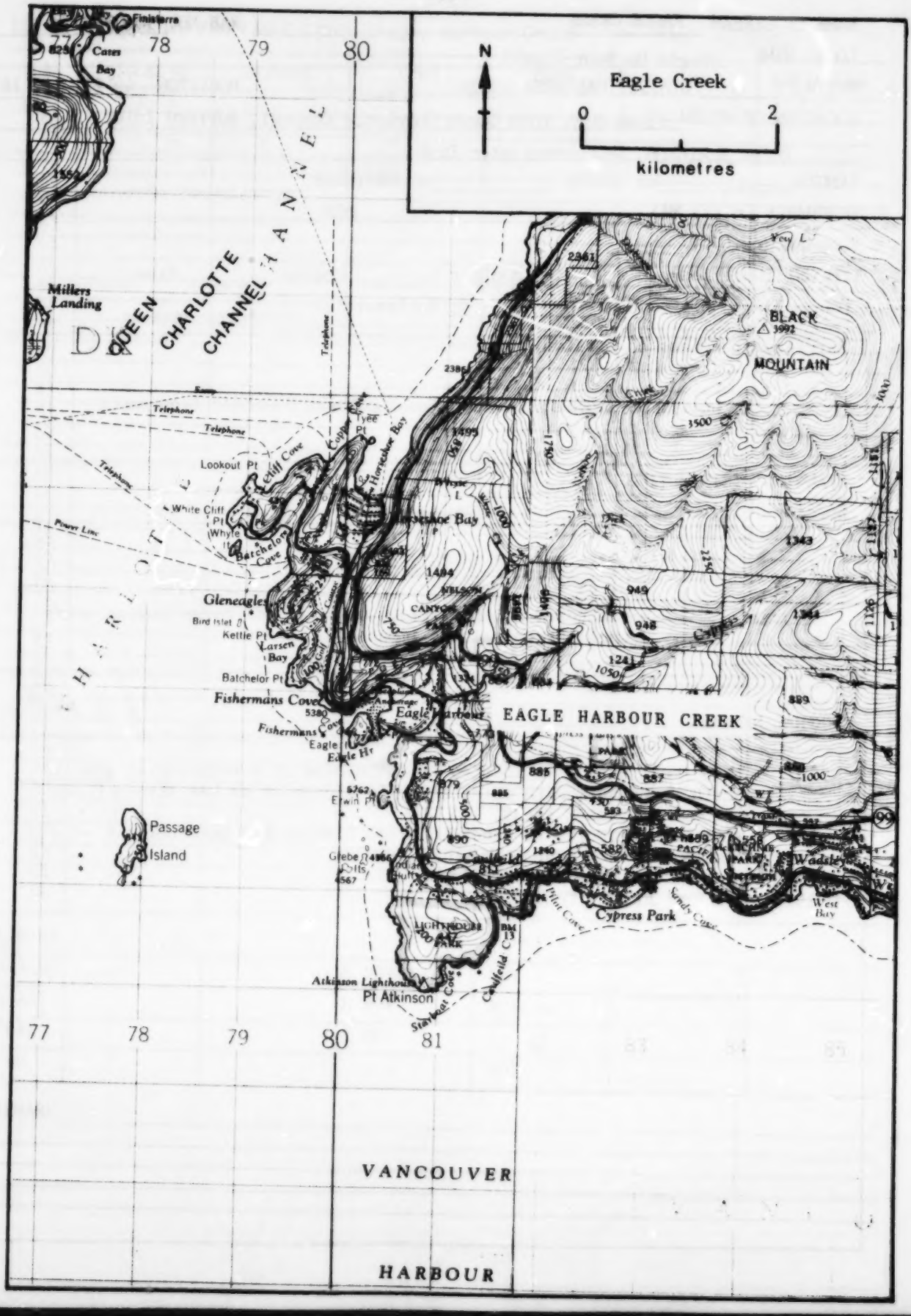
ESCAPEMENT RECORD FOR (Dryden Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84			50			
85						

TIMING

ARRIVE			L OCT			
START			M NOV			
PEAK			E DEC			
END			M DEC			

REMARK


N
Eagle Creek
0
2
kilometres
Finisterre
Cates Bay
Millers Landing
QUEEN CHARLOTTE CHANNEL
STRAIT OF GEORGIA
BLACK MOUNTAIN
Lookout Pt
Cliff Cove
Tyee Pt
Horseshoe Bay
White Cliff Pt
Batchelor Cove
Gleneagles
Bird Islet
Kettle Pt
Larsen Bay
Batchelor Pt
Fishermans Cove
Eagle Harbour
EAGLE HARBOUR CREEK
Passage Island
Glebe Cliffs
Caulfield
Cypress Park
Pilot Cove
Sandy Cove
West Bay
Atkinson Lighthouse
Pt Atkinson
Starboat Cove
VANCOUVER HARBOUR
77
78
79
80
81

NAME OF STREAM EAGLE CREEK RAB NO. 90-0988

LOCAL NAME (Eagle Harbour Creek)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 21′ 123° 16′

LOCATION OF MOUTH Flows S.E. into Queen Charlotte Channel, Burrard Inlet, N. of Point Atkinson, New Westminster Dist.

LENGTH .80 km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable rock falls at 1.2km culvert 3 meters from mouth

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- scattered in tidal flats at mouth of stream during years when the culvert is impassable

GENERAL REMARKS

1971 This small stream is located in the middle of a residential area in North Vancouver. Fish molestation is a problem as the stream flows through many back yards.

1979 Recommend measures be taken to allow fish access past culvert — approx 274 m of usable spawning grounds.

1980 No work yet done on improving access.

1984 W/L low June to October.

ESCAPEMENT RECORD FOR EAGLE CREEK (Eagle Harbour Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69		NO	RECORDS PRIOR TO 1970			
70				25		
71				15		
72				25		
73				6		
74				25		
75				25		
76				N.O.		
77				N.O.		
78				-		
79				6		
80				N.O.		
81			6			
82				-		
83				N/O		
84			7	3		
85						

TIMING

ARRIVE			E NOV	NOV		
START			M NOV	NOV		
PEAK			E DEC	-		
END			-	NOV		

REMARK

N
Flume Creek
0
2
kilometres
T.L. 4290
T.L. 4300
T.L.10979
N. Part
2439
Wilson
Hayden
Roberts
Clark
Robinson
Flume
Roberts Creek
Rock Point
White Islets
STRAIT
OF
GEORGIA

NAME OF STREAM FLUME CREEK RAB NO. 90-1580

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 26′ 123° 40′

LOCATION OF MOUTH Flows S.W. into Straits of Georgia, W. of Roberts Cr. P.O. New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable rock falls at 1.6km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- evenly distributed in lower reaches

GENERAL REMARKS

1972 First report. This stream has very good potential - slow moving, good steady flow conditions plus good spawning gravel. The stream has been hard hit by sub-division development and the road construction around the area.

1979 This stream has potential if passage was available past the falls at the mouth of the stream. The Sechelt Fish and Game Club have undertaken to install an incubation box (S.E.P.Program). High flooding in Dec. this year may have destroyed the egg take.

1980 Sechelt Fish and Game Club intend to blast out the falls at the mouth of the creek and intend to plant chum in the system.

1981 Falls blasted to allow fish passage upstream.

ESCAPEMENT RECORD FOR FLUME CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70			NO RECORDS PRIOR TO 1972			
71						
72				25		
73				75		
74				25		
75						
76			UNK	N.O.		
77			UNK	N.O.		
78			UNK	N.O.		
79			UNK	N.O.		
80			N.O.	UNK		
81			N.O.	UNK		
82			N.O.	2		
83			UNK	6		
84			N.O.	N.O.		
85						

TIMING

ARRIVE				M OCT		
START				L OCT		
PEAK				E - L NOV		
END				L NOV-M DEC		

REMARK

Hastings Creek

see

Lynn Creek p.79

NAME OF STREAM HASTINGS CREEK RAB NO. 90-0800-020

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 19′ 123° 01′

LOCATION OF MOUTH Flows SE into Lynn Cr. E. of North Vancouver, New West. Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable concrete culvert at .40km

Impassable culvert at Lynn Valley Rd. 2km upstream.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	from Arbourlynn Dr. to Ross Rd. (83) above fish ladder to Lynn Valley Rd. (1981)

GENERAL REMARKS

1977 Recommend that part of the culvert at Arbourlynn Rd. be removed and a small fish ladder be installed. Hastings Creek had more coho and steelhead on the spawning grounds than Lynn Cr. prior to the installation of the culvert in the early 60's

1978 Fish ladder was installed by the Squaretailers Fish and Game Club in Aug. of this year. No coho were observed upstream. By mid December several steelhead were observed above the ladder.

1979 Recommend that baffles are installed at the Lynn Valley Rd. culvert. An incubation box was installed at Lynn Valley Road and 30,000 Capilano eggs were transported and transplanted.

1981 Approx. 30,000 Capilano Hatchery eggs were placed in Hastings Cr.

Most years reported predation by humans.
Seasonal fluctuations in water levels.

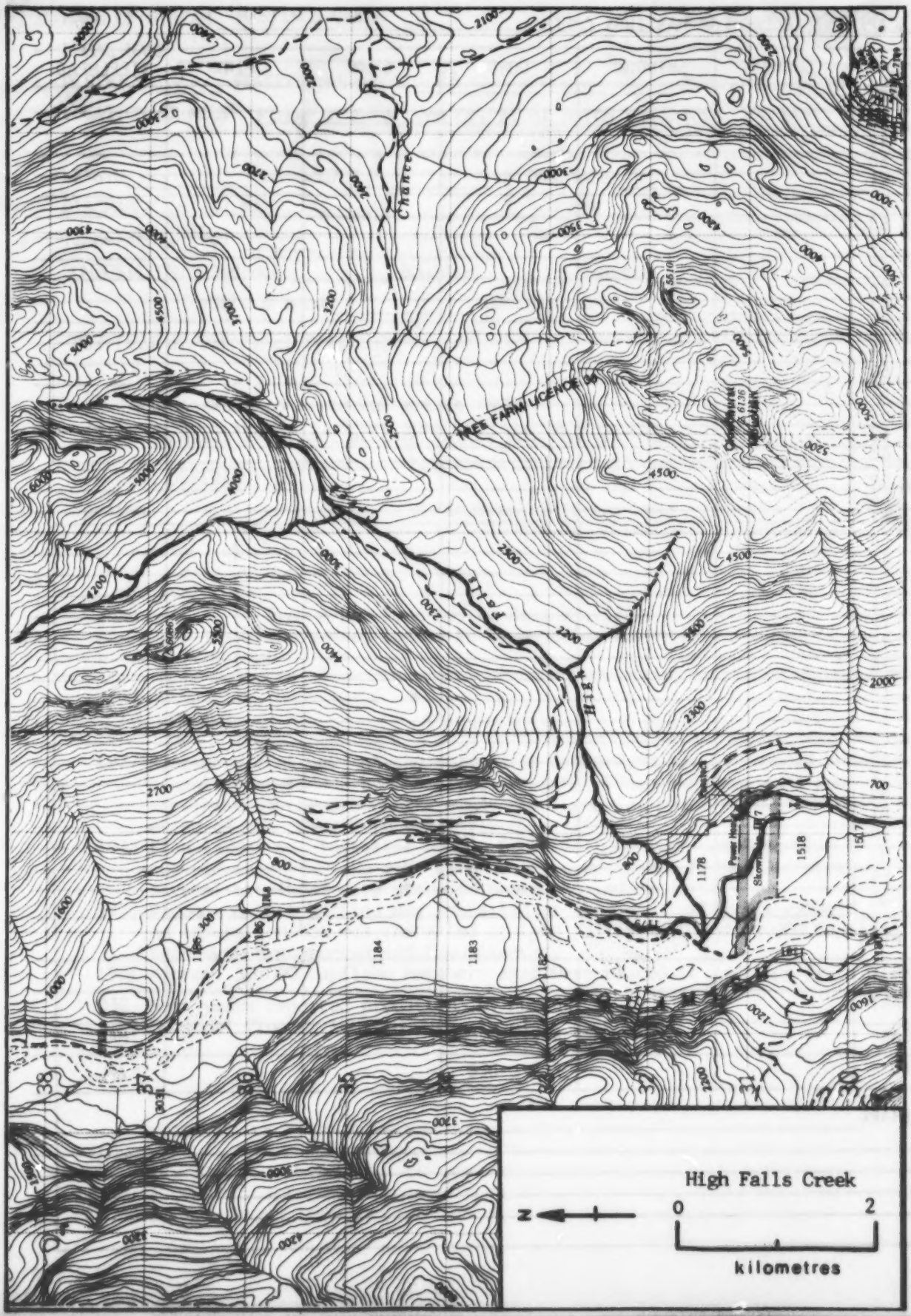
ESCAPEMENT RECORD FOR HASTINGS CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77			16			
78			12			
79			50			6
80			175			18
81			85			15
82			78			2
83			16			
84			32			3
85						

TIMING

ARRIVE			OCT			
START			NOV			DEC
PEAK			NOV - E DEC			MAR
END			E - L DEC			APL

REMARK


TREE FARM LICENCE 6B
Commercial Thinning
1984-1989
6136
5810
Power House
Storage
1178
1518
1517
1184
1183
1182
1181
1180
High Falls Creek
N
0
2
kilometres

NAME OF STREAM HIGH FALLS CREEK RAB NO. 90-1300-150

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 56′ 123° 19′

LOCATION OF MOUTH Flows S.W. into Squamish River, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable rock falls at 3.2km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- random distribution from Squamish confluence to just above logging road bridge (1982) - main concentration between confluence of B.C.Hydro powerhouse channel and T.F.L.main road (1983)

GENERAL REMARKS

1979 First Report — this streams populations previously included in Squamish River figures.

1981 High w/l on October 31.

1980 Flood conditions in late December. Losses to coho in the 40% range. Some erosion silting and scouring.

1982 Stream is very ill defined with many small branches within the lower reaches.

1983 Channel flows into B.C.Hydro powerhouse channel which is considered part of the Squamish River. Chinook primarily spawn in the channel and seem to migrate into High Falls Creek on only an incidental basis.

Water levels normal throughout most of the year — high flows over fall and early winter months.

Light predation by bears and eagles.

ESCAPEMENT RECORD FOR HIGH FALLS CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			75			25
80			200			
81			400			
82		10	50			
83			50			
84			50			
85						

TIMING

ARRIVE			OCT			APL
START			OCT - E NOV			APL
PEAK			DEC - E JAN			MAY
END			DEC - M JAN			JUN

REMARK Figures for this stream previously included in Squamish River population.

Hop Ranch Creek

see

Dryden Creek p.43

NAME OF STREAM HOP RANCH CREEK RAB NO. 90-1300-030

LOCAL NAME (Hop Ranch Creek System (4)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°45'123°08'

LOCATION OF MOUTH Flows S.W. into Squamish River, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX 1.00 Jan. 20, 1968 MIN -

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable rock falls at 3.2km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- even distribution between highway 99 and Squamish confluence
chum	- " " "

GENERAL REMARKS

1979 This streams population previously included with Squamish River figs.
1980 Flood conditions in late December. Estimate 25% loss of coho spawn. Some silting erosion and scouring.
1982 Slight change in stream course in lower reach due to flood control. Water levels normal except during late Oct. flood when water levels very high.
Pumping station for flood control put in place at Squamish River confluence. During flood periods control gates to culverts are closed and runoff is either allowed to back up in creek or is pumped over dyke.
1983 This stream is very susceptible to public harassment — flows through major residential area.

ESCAPEMENT RECORD FOR HOP RANCH CREEK (Hop Ranch Creek System (4))

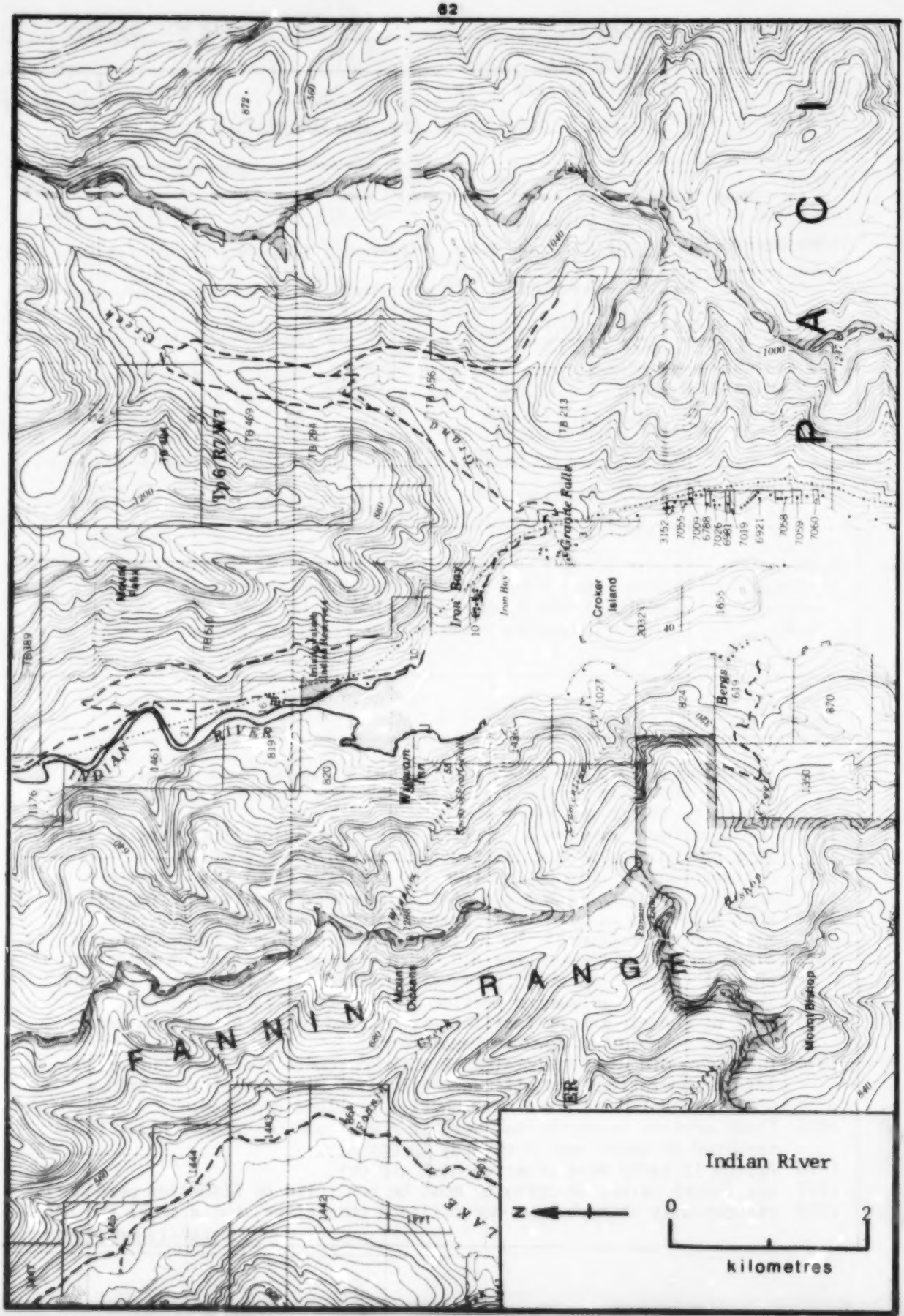
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			25			
80			200			
81			50	50		
82			30	50		
83			30			
84			30			
85						

TIMING

ARRIVE			OCT			
START			E - M NOV			
PEAK			L NOV - DEC			
END			M DEC - JAN			

REMARK This stream previously included with Squamish River counts.

N
Indian River
0
10
kilometres
BURRARD INLET
Port Moody
Coquitlam
Burquitlam
Annacis
Harvey
PITT
LAKE
COQUITLAM LAKE
COQUITLAM RIVER


PACI
FANNIN RANGE
INDIAN RIVER
Iron Bar
Croker Island
Mount Fanning
Mount Dobbins
Monday Bishop
Indian River
N
0
2
kilometres

NAME OF STREAM INDIAN RIVER RAB NO. 90-0500

LOCAL NAME (Burrard River)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°28′ 122°53′

LOCATION OF MOUTH Flows S. into Indian Arm, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

falls at 9.6km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- in first 6.4km heavy concentration in sloughs
pinks	- in lower 5.6km concentrated in main river
chinook	- above Twin Bridges and below falls
coho	- in sloughs and lower end of tributary streams

GENERAL REMARKS

1959 Canadian Colliery Resources constructed a logging road up the right bank of the river to the falls. In 1969 they started logging and shake manufacturing at the river mouth.

1961 The Department erected a counting weir and holding facilities at 1.6km. Pink salmon eggs were collected for transplant purposes.

1966 A transplant of chinook fry from the Qualicum River was undertaken in an effort to establish a run of this species. Results were negative.

1968 When B.C.Hydro cleared their transmission line right of way, they left areas in the bottom of the valley which were subject to breakthrough.

1972 Flood water cut through the B.C.Hydro right of way and the existing channel was cut off when the river reverted to a channel cut in 1968. The length of the changed portion of the stream is approx. 4km.

1973 Most of the egg taking facilities installed by the R.D.Branch were removed by Weldwood for the Department.

1974 B.C.Hydro did usual maintainance work on towers. Weldwood curtailed logging operations and will resume in 1975.Minor repairs on bridge will be carried out, but no Fisheries problems expected.

1975 Pinks arrived at mouth last week in August and unseasonal heavy rains resulted in brief period of stay in estuary.

1976 Approx 12 redds were observed high and dry.

1977 Any future herbicide spraying must be monitored by Fisheries personnel.

1978 Historically chinook have not utilized this river, but a small run has established itself.

continued

INDIAN RIVER

1984 Some over spawning .

Physical Conditions:

1968 30% silting during heavy freshets — heavy scouring and stream changes in 3 locations.
1969 Some changes of location of main channel in Hixon Cr. area.
1978 Minor silting, 15 - 20%, and slight scouring.
1981 50-60% erosion and silting, extensive changes in course after high water. 60% loss of pink spawn due to scouring.
1983 20% erosion and silting — 25% of pink and chum spawning area affected by scouring. Water levels low during summer and fall — high in first week of November floods.
1984 Side channel has changed in some areas. Erosion above falls by road side. Flooding and freshetts cause river to change course each year.

Predation: bears, merganzers, humans. 1984 reported 100 bald eagles in vicinity.

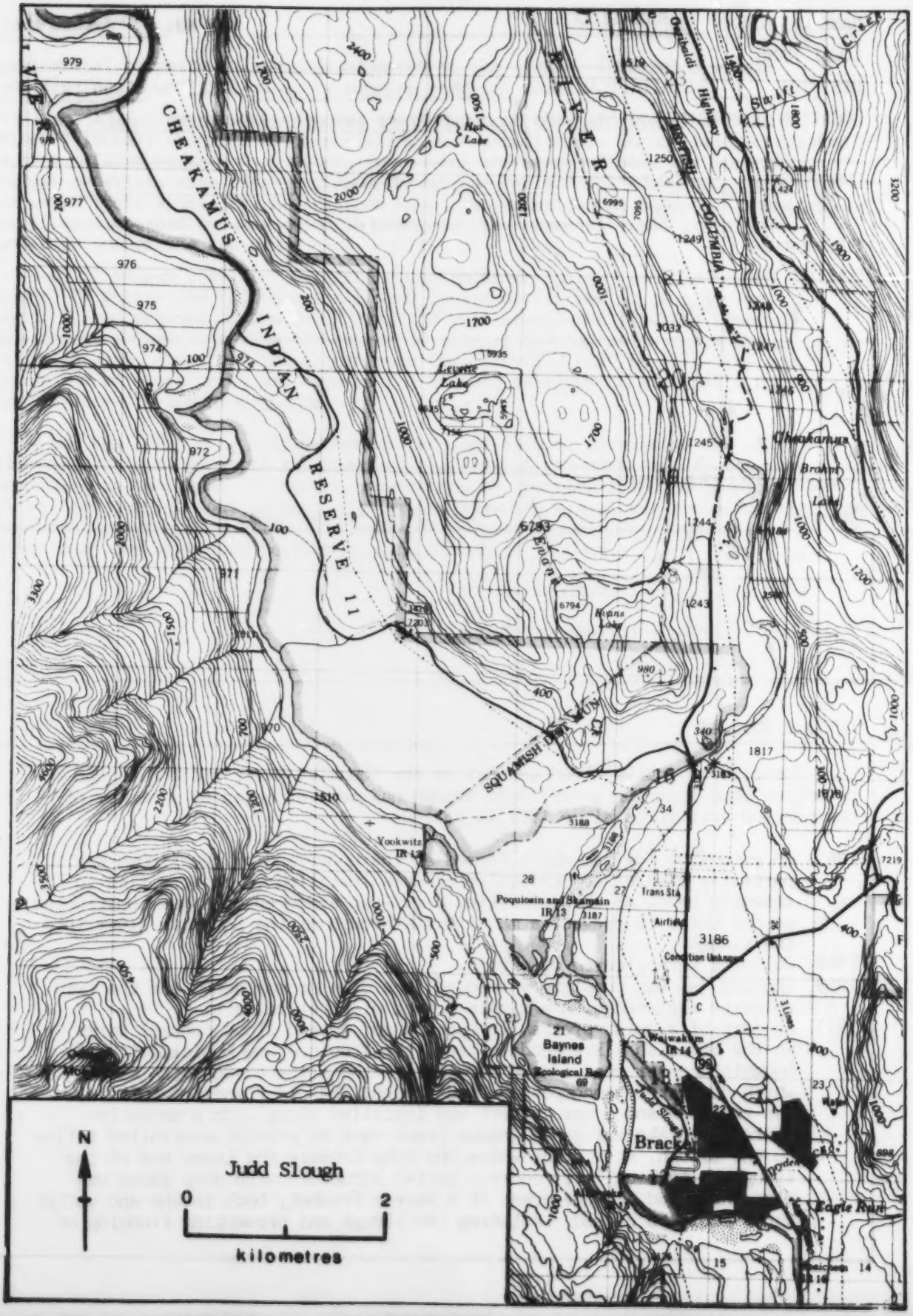
ESCAPEMENT RECORD FOR INDIAN RIVER (Burrard River)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947	25		750	15000	75000	75
48			1500	15000	N/0	75
49	25		1500	3500	100000+	75
50			1500	3500	N/0	400
51			3500	35000	75000	750
52			3500	35000	75	400
53			1500	1500	100000+	400
54			1500	35000	200	400
55			3500	3500	75000	400
56			1500	1500		400
57			1500	3500	125000	400
58			750	15000	N/0	200
59			UNK	UNK	UNK	UNK
60			1500	4000		400
61			3500	2500	67800	200
62			400	3500		400
63			1500	3000	200000	400
64			3500	5000		200
65			400	3500	35000	400
66			1500	3500	75	200
67			1500	3500	7500	200
68			750	15000	N/0	400
69	25		400	15000	7500	200
70	25		750	15000	N/0	200
71	25		750	7500	35000	200
72	N/0		400	35000	N/0	200
73	N/0		750	35000	35000	200
74	N/0		750	7500	N/0	200
75	75		200	15000	35000	200
76			200	20000	-	UNK
77	25	25	500	14000	22000	25
78	7	6	150	7000	-	25
79	12	180	280	7500	22000	50
80	25	50	300	15000	-	150
81	8	20	800	17500	40000	80
82		50	450	24000	-	75
83	16	70	700	26000	24000	55
84	12	100	600	30000		180
85						

TIMING

ARRIVE	E SEPT	E SEPT	E SEPT	E - M OCT		DEC
START	M AUG	E SEPT	JUL-L SEPT	E - M OCT	JUL - SEPT	
PEAK	SEPT - E OCT	L OCT	OCT - NOV	E OCT - NOV	SEPT	
END	L OCT	E DEC	NOV - L JAN	NOV - L DEC	L SEPT-OCT	MAY

REMARK


CHEAKAMUS INDIAN RESERVE 11
FRASER RIVER
SQUAMISH DEBAY LOOP
Cheakamus Lake
Levette Lake
Hutt Lake
Hanna Lake
Elaine
Yookwitz IR 12
Poquioem and Skaiyain IR 13
Baynes Island Ecological Reserve 69
Trans Sta
Airfield
3186
Condition Unknown
Wawaskum IR 14
Eagle Run
Judd Slough
N
0
2
kilometres

NAME OF STREAM JUDD SLOUGH RAB NO. 90-1300-040

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°46' 123°10'

LOCATION OF MOUTH Flows S. into Squamish River through Brackendale Community.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- throughout channel
chum	- throughout channel

GENERAL REMARKS

Formerly an active flood channel of the Squamish River and one of the principal chum spawning areas, Judd Slough has been affected by a number of engineering activities since 1967 as follows:

1967 An extensive log jam which formed at the upper end of the slough was partially cleared and two culverts were installed to restore flow to spawning beds. At the same time, a rip-rap armoured dyke was constructed at the inlet to prevent a major breakthrough of the Squamish River into the slough.

1968 Culverts were cleared of debris.

1969 The log jam was completely removed, the dyke strengthened and the twin culverts replaced with a single 5 foot diameter culvert.

1975 As part of a joint program to upgrade and extend flood control works in the Squamish - Brackendale area, the Province and Municipality of Squamish constructed a dyke parallel to the mainstem Squamish River which completely encompassed Judd Slough. The old Fisheries-built dyke was replaced and a new culvert was installed along with a manually-operated intake valve and intake trash rack to provide controlled inflow to the slough. At a point where the dyke crosses the lower end of the slough, a twin-culvert concrete outlet structure with drop gates was also installed. In the event of a severe freshet, both intake and outlet gates could be closed, isolating the slough and preventing flooding of

Judd Slough

residential property on lowlands adjacent to the slough. Internal drainage was provided by a large-capacity pumping station.

1978 and 1979 Improvement work was carried out on the main slough and two minor tributary channels by channelizing with a bulldozer. Channelization created a more uniform width and gradient, increasing the area suitable for spawning. Coarse materials were excavated from the stream bed and placed on banks to increase their stability. At the same time, two experimental pond-type spawning areas were created by excavating adjacent to the channel. Graded gravel was added to one of the two ponds.

1979-84 Siltation resulting from the Squamish River inflow, and the rapid spread of grass-like rooted aquatic weed caused deterioration of spawning beds. At the request of the Small Projects Unit of SEP the Province removed the intake structure during the course of other flood control work in the Squamish area. Flows in Judd Slough were then provided only by silt-free ground water and an opportunity was created for further development aimed at a purely groundwater-fed spawning channel.

1984 The Small Projects Unit rechannelized Judd Slough, excavating the old channel to a greater depth to increase the flow of groundwater. Rip-rap armouring was added to the banks to prevent undermining by spawning fish and to create cover for juvenile coho salmon. Size graded spawning gravel was not added since the native material was of good quality. The area of improved spawning/rearing habitat created in the developed portion of Judd Slough is 5360 m^2.

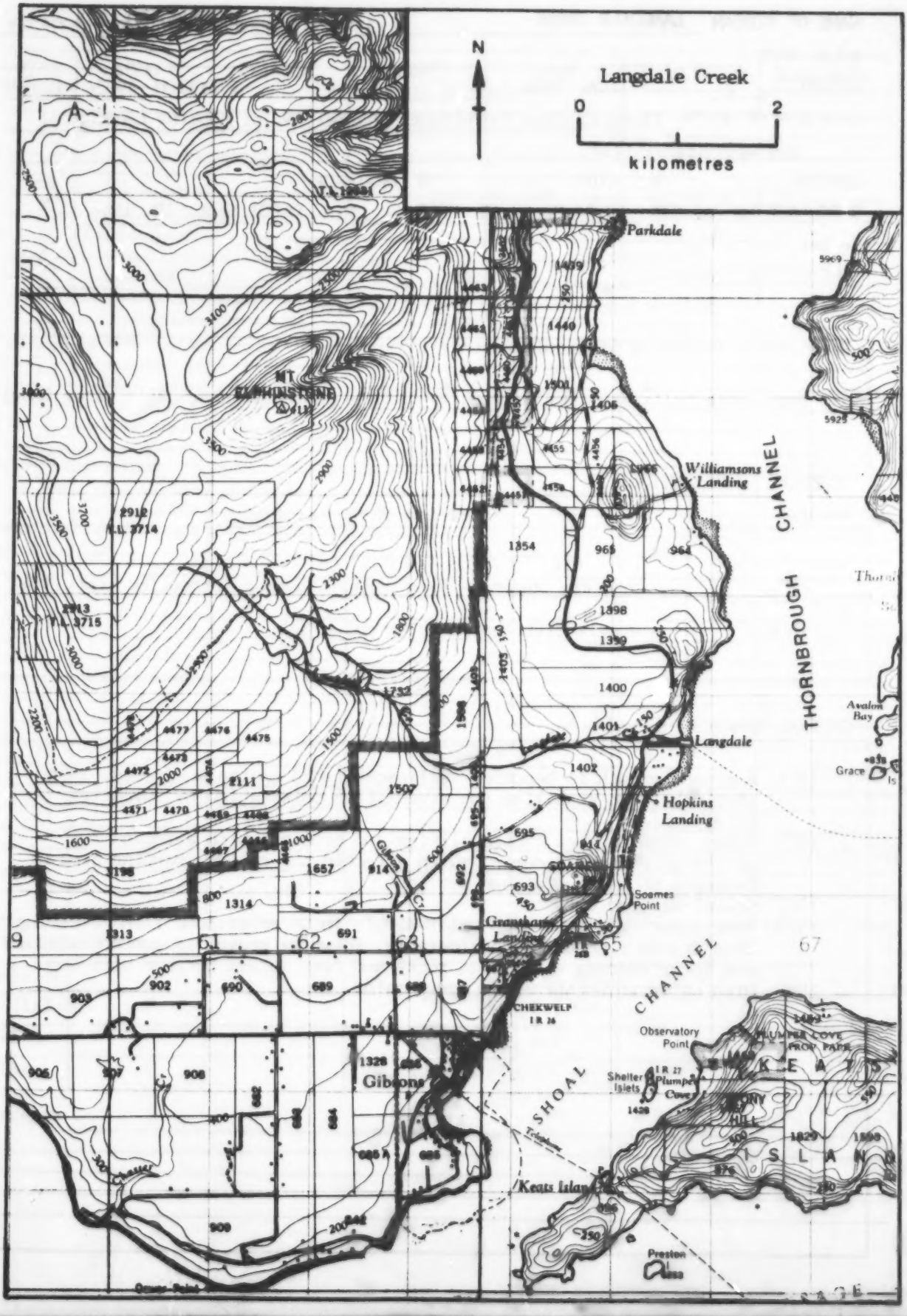
ESCAPEMENT RECORD FOR (Judd Slough)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84			50	7000		
85						

TIMING

ARRIVE			E DEC	L OCT		
START			M DEC	E NOV		
PEAK			E JAN	E DEC		
END			L JAN	L DEC		

REMARK


N
Langdale Creek
0
2
kilometres
Parkdale
Williamsons Landing
THORNBROUGH CHANNEL
Langdale
Hopkins Landing
Soames Point
Grantham Landing
CHEKWELP I.R. 26
SHOAL CHANNEL
Observatory Point
Shelter Islets
I.R. 27
Plumper Cove
PLUMPER COVE PROV. PARK
K E A T S
I S L A N D
HILL
Keats Island
Gibsons
Preston
Avalon Bay
Grace Is.
MT. ELPHINSTONE
T.L. 3714
T.L. 3715
T.L. 1284

NAME OF STREAM LANGDALE CREEK RAB NO. 90-1525

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 26′ 123° 28′

LOCATION OF MOUTH Flows E. into Thornbrough Channel, N. of Hopkins Landing, New Westminster Dist.

LENGTH 1.6 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 3.74 Sept. 18, 1968 MIN 0.001 Sept. 19, 1968

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable falls at 1.6km.culvert at 1.2km — passable at suitable water levels

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- coho fry observed above culvert during inspection Oct.1974
chum	- evenly distributed below culvert

GENERAL REMARKS

1971 A second growth is becoming well established on the watershed. This should help to stabilize the stream.Fish molestation by juveniles is a problem.

1972 Heavy rains in Dec. caused silting and erosion which affected 20% of the stream and scouring which affected the entire spawning area. Estimate 60 - 70% of spawn was lost.

1977 Gravel scoured out.

1979 Some scouring due to high water levels in December.Some fish molesting. This stream fluctuates considerably. Spawning gravel is concentrated in the lower reaches with large rocks and fast waters further upstream.

1982 High water in October from heavy rains.

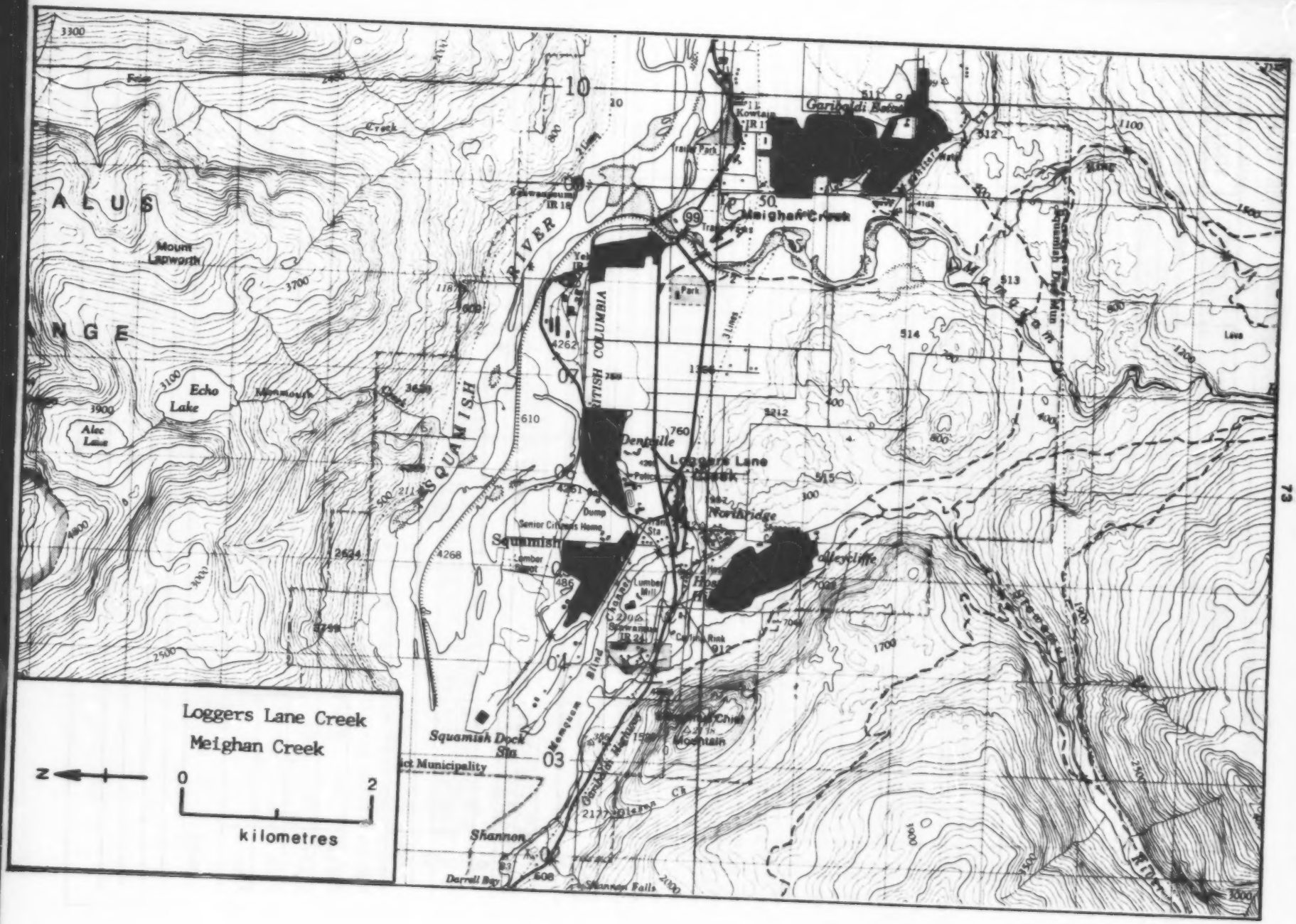
ESCAPEMENT RECORD FOR LANGDALE CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69		NO	RECORDS PRIOR TO 1970			
70				200		
71				50		
72				150		
73				75		
74				25		
75				25		
76				N.O.		
77				125		
78				50		
79				25		
80				12		
81				N.O.		
82				24		
83				6		
84				6		
85						

TIMING

ARRIVE				E OCT-E NOV		
START				E OCT-M NOV		
PEAK				E-M NOV		
END				E NOV-M DEC		

REMARK


Loggers Lane Creek
Meighan Creek
0
2
kilometres
Squamish
Dentville
Loggers Lane
Meighan Creek
Garibaldi Estates
Garibaldi Highlands
Squamish Dock Site
Shannon
Darrell Bay
Shannon Falls
Mount Garibaldi
Mount Logworth
Echo Lake
Alec Lake
Monmouth Creek
Squamish River
British Columbia
Northridge
Valleyview
Cleveland Blvd
Clarke Rd
Dump
Senior Citizens Home
Lumber Mill
Municipality
Kowtain IR 1
Yekwaupsum IR 18
Squawum IR 24
Trailer Park
Park
Rink
Lake
Creek
Ch
Mountain

NAME OF STREAM (Loggers Lane Creek) RAB NO. -

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°43′ 123°09′

LOCATION OF MOUTH Flows into Mamquam Blind Channel, near Dentville Community.

LENGTH 4.8 km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- in pond at mouth of stream -- upstream side of Loggers Lane Rd.

GENERAL REMARKS

1981 Reported spawning in top end of creek.

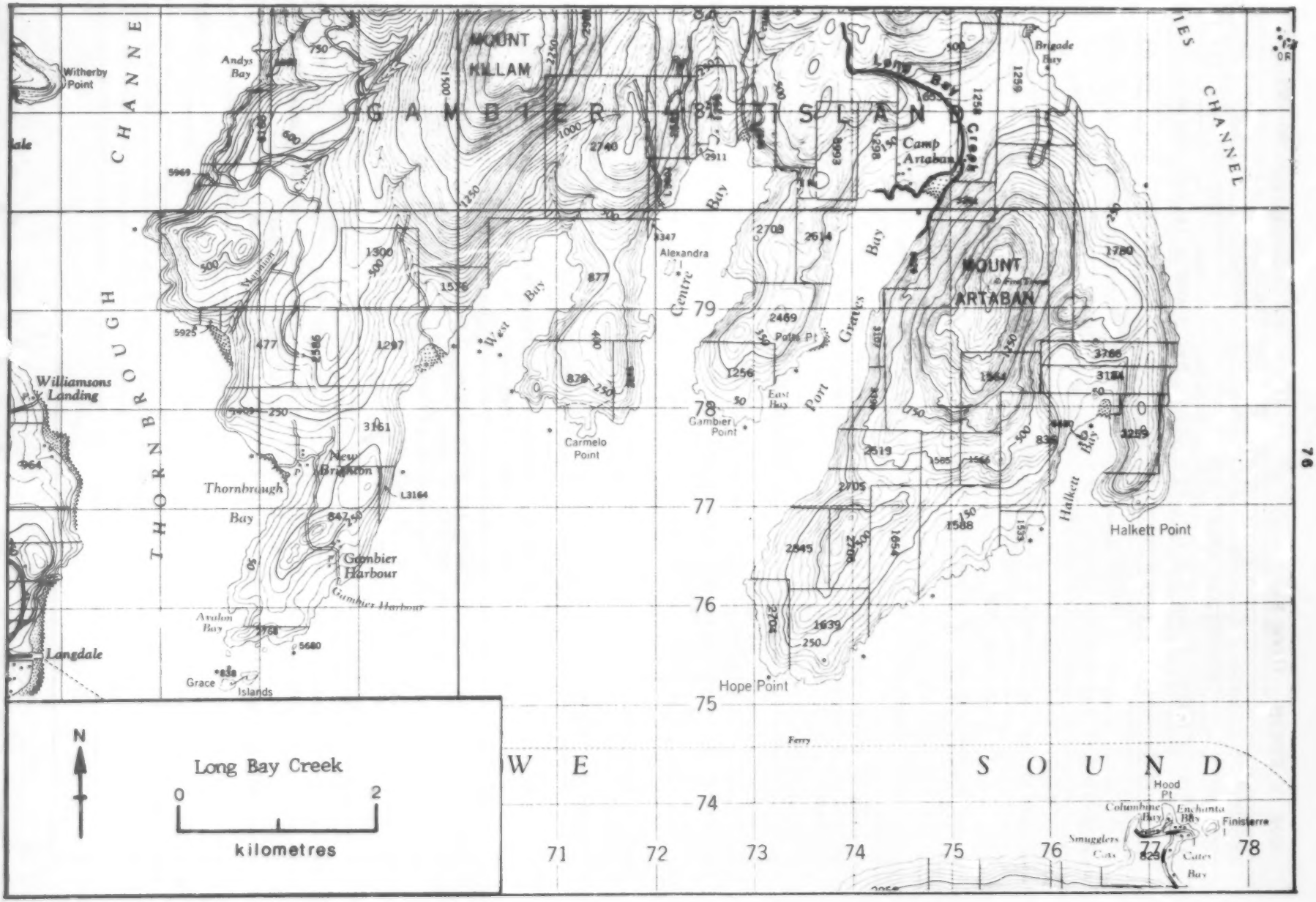
ESCAPEMENT RECORD FOR (Loggers Lane Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			25			
80			25			
81			20			
82			25			
83			5			
84			10			
85						

TIMING

ARRIVE			NOV			
START			DEC			
PEAK			DEC-JAN			
END			JAN-FEB			

REMARK


GAMBIER ISLAND
MOUNT KILLAM
MOUNT ARTABAN
Witherby Point
Andys Bay
Long Bay
Long Bay Creek
Brigade Bay
Camp Artaban
Alexandra
Centre Bay
West Bay
Port Gravies Bay
Williamsons Landing
Thornbrough Bay
New Brighton
Carmelo Point
Gambier Point
East Bay
Halkett Bay
Halkett Point
Gambier Harbour
Avalon Bay
Langdale
Grace Islands
Hope Point
Ferry
Hood Pt
Columbine Bay
Enchanta Bay
Finisterre
Smugglers Cove
Cates Bay
THORNBROUGH CHANNEL
SOUND
N
Long Bay Creek
0
2
kilometres

NAME OF STREAM (Long Bay Creek) RAB NO. 90-1500-027

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 30′ 123° 23′

LOCATION OF MOUTH Flows S.E.into Port Graves Bay, Gambier Island, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable at 1.2km where stream narrows and gradient rises rapidly

some storm debris (leaves and branches)

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- evenly distributed — some overspawning in heavy run years.

GENERAL REMARKS

1969/70 This small stream has excellent spawning beds, good gravel, well defined banks and a stable water flow.

1976/77 Considerable overspawning and egg-digging in shallow gravel areas. Addition of gravel would be a good pro ject on this stream. The stream is potentially a good producer. It is away from civilization and there are no predators of any consequence.

1978 Approx 30% of stream affected by erosion — flash floods and high water cause scouring and shifting gravel areas. Debris removed by hand after storms.

1979 25% of lower stream below culvert affected by siltation. Heavy rains in mid Dec. scoured out spawning bed and destroyed 80% of spawn. Sub-division development in area may lead to frequent flash flooding in future if a substantial area of land is cleared

1981/82 Scouring through right fork of stream.

ESCAPEMENT RECORD FOR (Long Bay Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64		NO RECORDS PRIOR TO 1965				
65				100		
66				1500		
67				300		
68				900		
69				2000		
70				3000		
71				1100		
72				2200		
73				3000		
74				200		
75				200		
76				1500		
77				3600		
78				1850		
79				1700		
80				1500		
81				2000		
82				520		
83				2100		
84				3900		
85						

TIMING

ARRIVE				E-L OCT		
START				E OCT-M NOV		
PEAK				M OCT-M NOV		
END				E-L DEC		

REMARK

N
Lynn Creek
0
10
kilometres
LYNN CREEK
Upper Lynn
Lynn Creek
Capilano
Lower Capilano
Maplewood
BURRARD
INLET
HARBOUR
SECOND
NARROWS
Brockton Pt
Deadman I
DND
WATER
SUPPLY
AREA

NAME OF STREAM LYNN CREEK

LOCAL NAME _____ RAB NO. 90-0800

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°19' 123°02'

LOCATION OF MOUTH Flows S. into Burrard Inlet, W. of Seymour R. New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable falls in canyon at 5 - 6 km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- in canyon
chum	- in lower reaches

GENERAL REMARKS

1968 The tidal portion of this stream was deepened in 1968 by the Vancouver Cruising Club.

1969 Steelhead and coho in this stream are subject to heavy sport fishing pressure during the open season.

1970,71,73, Industrial pollution, leachate from Lynn Creek Garbage Dump and gravel removal by North Shore Municipalities over the past 10-15 years may account for the lack of chum and pink in this area. The municipalities are presently observing gravel removal restrictions.

1971 Because the city of North Vancouver takes its water supply from this creek, the water flow is critically low during dry periods. In 1971, the guaranteed flow was 2 cfs.

1974 A partial obstruction was eliminated when the Dist. of North Vancouver replaced and buried a water main at a crossing site below the canyon.

1975 Estuary of the creek channelized and filled for large deep-sea lumber terminal.

1977 A renewed application to remove gravel from lower portion of creek will have an adverse effect on salmon enhancement. The continued use of the garbage dump site adjacent to the creek contributes to the degradation of spawning area used by chum and pinks.

1979 Heavy December rains probably destroyed the majority of this years spawn.

1981 Heavy October rains have probably destroyed the majority of this years early spawn. Toxic Leachates from Premier Landfill site were found in the creek.

continuation

LYNN CREEK

Physical conditions:

1979 10% erosion and silting — heavy scouring of bed during heavy Dec. rain.
1981 75% erosion and silting — scouring from canyon to 3rd St. Bridge.
1982 Water levels low during June to September.

1979/84 Reported predation by humans.

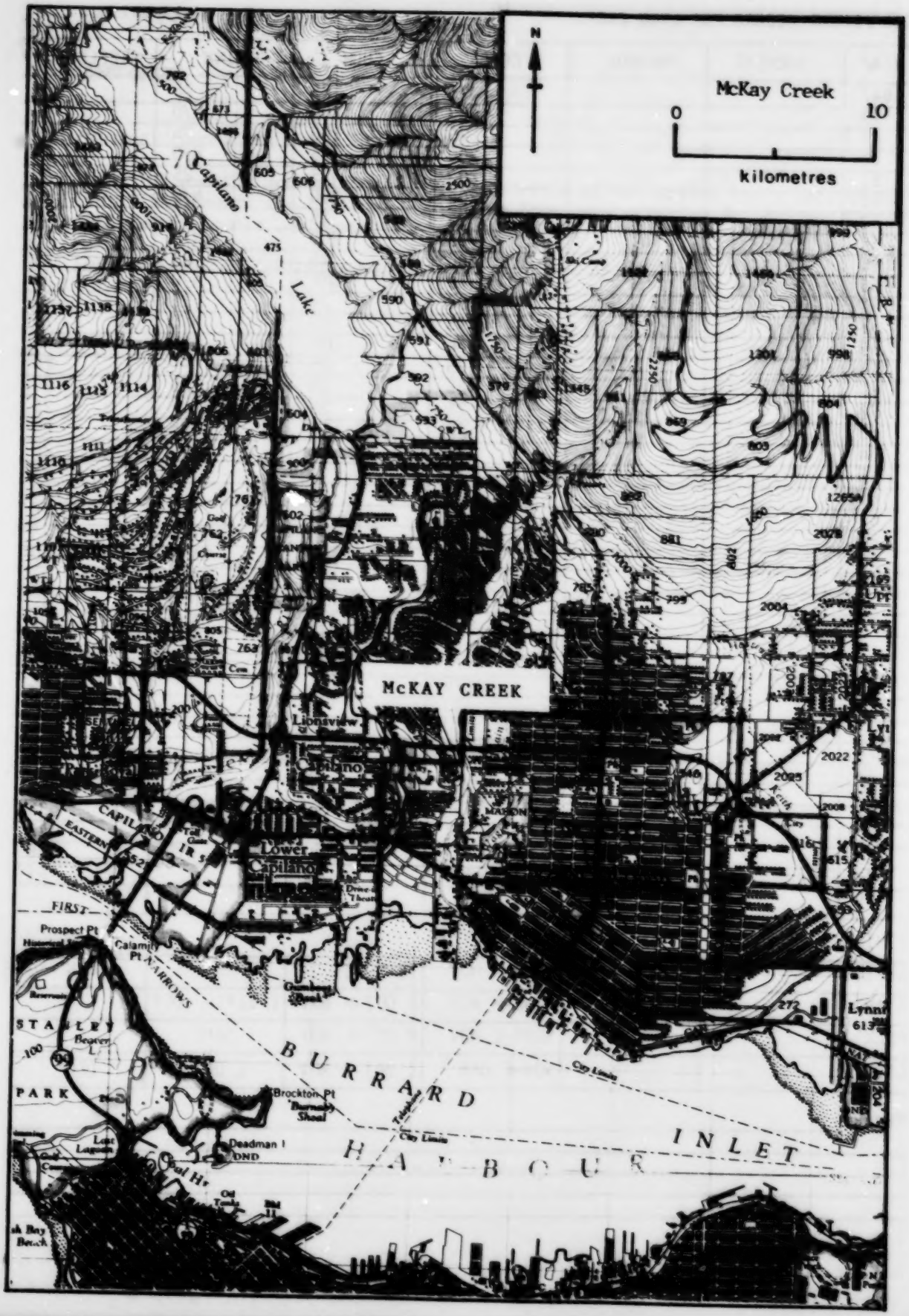
ESCAPEMENT RECORD FOR LYNN CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			75	25	75	25
48			400	200	N/O	25
49			75	200	75	25
50			200	75	N/O	25
51			200	25	25	75
52			200	200	N/O	25
53			75	25	25	25
54			75	200	N/O	75
55			200	25	25	75
56			75	UNK	N/O	75
57			200	25	25	25
58			75	75	N/O	75
59			UNK	UNK	UNK	UNK
60			25	25		25
61			25	25	25	25
62			25	25		25
63			25	25	25	25
64			25	25		25
65			25	25	25	25
66			25	25		750
67			25	25		25
68			25	25		25
69			200	N/O	N/O	200
70			75	N/O	N/O	25
71			75	N/O	N/O	25
72			400	400	N/O	200
73			75	25	N/O	25
74			75	25	N/O	25
75			75			25
76			30	N/O		UNK
77			60	N/O		25
78			85	6		25
79		4	42	10	26	
80			250	10		60
81		4	120	10		35
82		6	121			42
83		6	175	N/O	N/O	18
84			185	16		44
85						

TIMING

ARRIVE			JUN-M NOV	E-M OCT		JAN
START		M OCT	JUN-M NOV	E OCT-M NOV	E SEPT-L OCT	
PEAK			SEPT-L NOV	M OCT-L NOV	SEPT	
END			NOV-E JAN	L OCT-L NOV	L OCT	DEC

REMARK


N
McKay Creek
0
10
kilometres
Capilano
Lake
McKAY CREEK
Lionsview
Lower Capilano
CAPILANO
EASTERN
FIRST
Prospect Pt
Calamity Pt
NARROWS
STANLEY
PARK
Brockton Pt
Deadman I
DND
BURRARD
INLET
HARBOUR
Lynn

NAME OF STREAM MACKAY CREEK RAB NO. 90-0860

LOCAL NAME (McKay Creek)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 13' 123° 06'

LOCATION OF MOUTH Flows S. into Burrard Inlet, E. of Capilano R. New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX 6.14 Dec. 17, 1979 MIN 0.005 Aug.22, 1977

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable small dam at 3.2 km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- even distribution from Marine Drive to Ridgewood Avenue

GENERAL REMARKS

1958 Water conditions are seriously affected by the extensive land clearing and residential development of the watershed areas of the stream. During the past dry season the stream bed was practically dry and it is to be expected that the resident coho fry population suffered heavily.

NO RECORDS UNTIL 1978

1978 Reports predation by public.

Seasonal fluctuations in water levels.

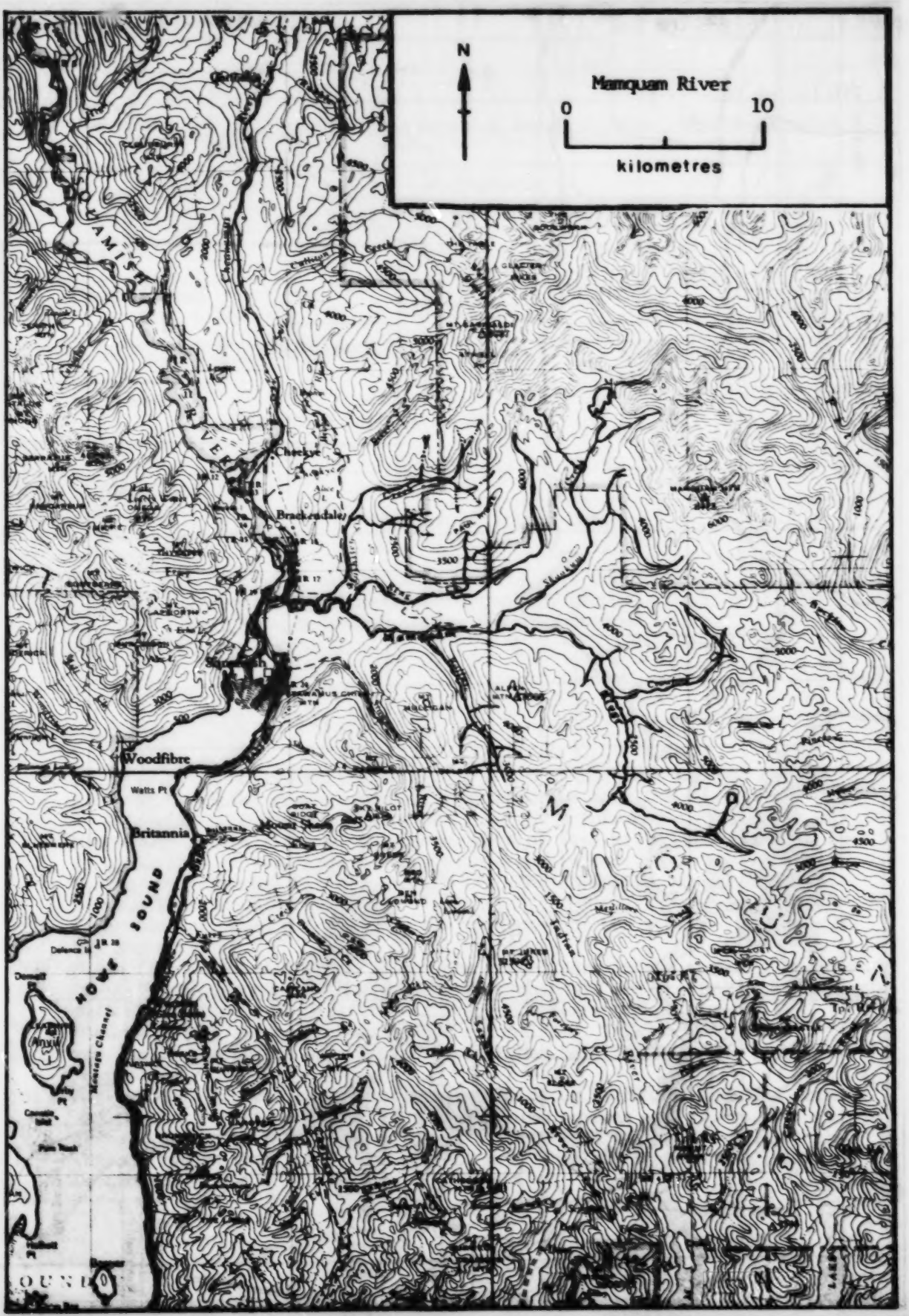
ESCAPEMENT RECORD FOR MACKAY CREEK (McKay Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25			
48			75			
49			25			
50			25			
51			75			
52			25			
53			25			
54			25			
55			25			
56			25			
57			25			
58			25			
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75			NO RECORDS SINCE 1958			
76						
77						
78			8			
79			18	4		
80			12	4		6
81			25	6		6
82			16			
83			16			
84			32			
85						

TIMING

ARRIVE			M OCT			
START			JUL-L OCT			
PEAK			SEPT-L NOV	M NOV		MAR
END			L OCT-L DEC			

REMARK


N
Mamquam River
0
10
kilometres
Squamish
Cheekye
Brackendale
Woodfibre
Watts Pt
Britannia
HOWE SOUND
Mamquam

Mamquam River
N
0
2
kilometres
GARIBALDI PROVINCIAL PARK
Squamish Dump
Squamish
Stawamus
Ridge
Squamish Dock
Squamish Municipality
BRITISH COLUMBIA
SQUAMISH

NAME OF STREAM MAMQUAM RIVER RAB NO. 90-1300-020

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°44'123°09'

LOCATION OF MOUTH Flows W. and S. into mouth of Squamish River, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 248 July 12, 1972 MIN 2.13 Sept. 15, 1970

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable falls at 4.8km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chinook	- scattered mainly above Mashiter Cr. confluence.
pink	- scattered primarily below Hwy. 99 bridge
chum	- in mainstream and in new spawning channel
sockeye	- scattered

GENERAL REMARKS

1963 The Provincial Government built a rock groin on the left bank of the river in the lower reaches to help stabilize the bank.

1970 An estimated 1000-1500 chum were destroyed by uninformed citizens.

1971 Very heavy sports fishery -- large numbers of fish killed by juveniles.

1972 25 - 30% loss of spawn due to very high water in Dec. Since the watershed in the upper reaches has been logged off, the stream is subject to rapid fluctuations in water levels.

1973 Fish molestation is a problem as the main part of the stream runs through the municipality.

1974 Flash flooding causes up to 35% of the gravel bars in the spawning grounds to shift after spawning. Most of the side channels are stable, but the main channel moves several times a year. Stabilization of flows will occur when the second growth is well established. This should not be too far in the future as some improvement has been noted in the last four years.

1975 Heavy floods in Oct. caused estimated loss of up to 80% in pink and chinook spawn.

1978 Stream subject to a very heavy sports fishery both spring and fall. Chinook return very poor. Coho did not arrive in any numbers until late December.

continued.....

continuation

MAMQUAM RIVER

1981 Chinook and pink spawn would have been damaged during the flood conditions on Oct. 31.
1982 Up to 700,000 cu. yds. of gravel removed from lower reaches to build up gravel bars. This amount may change the stream dynamics of the lower reaches.
1983 20% chum spawned in mainstream while 80% spawned in newly created ground water fed channel dug in conjunction with construction of dykes. Most sockeye and coho seen in this channel, which offers far more favorable spawning habitat as compared to the fast flowing Mamquam River. Extensive gravel removal and dyking operations took place from July to October.Dyking program for Mamquam now almost complete.

Physical conditions:

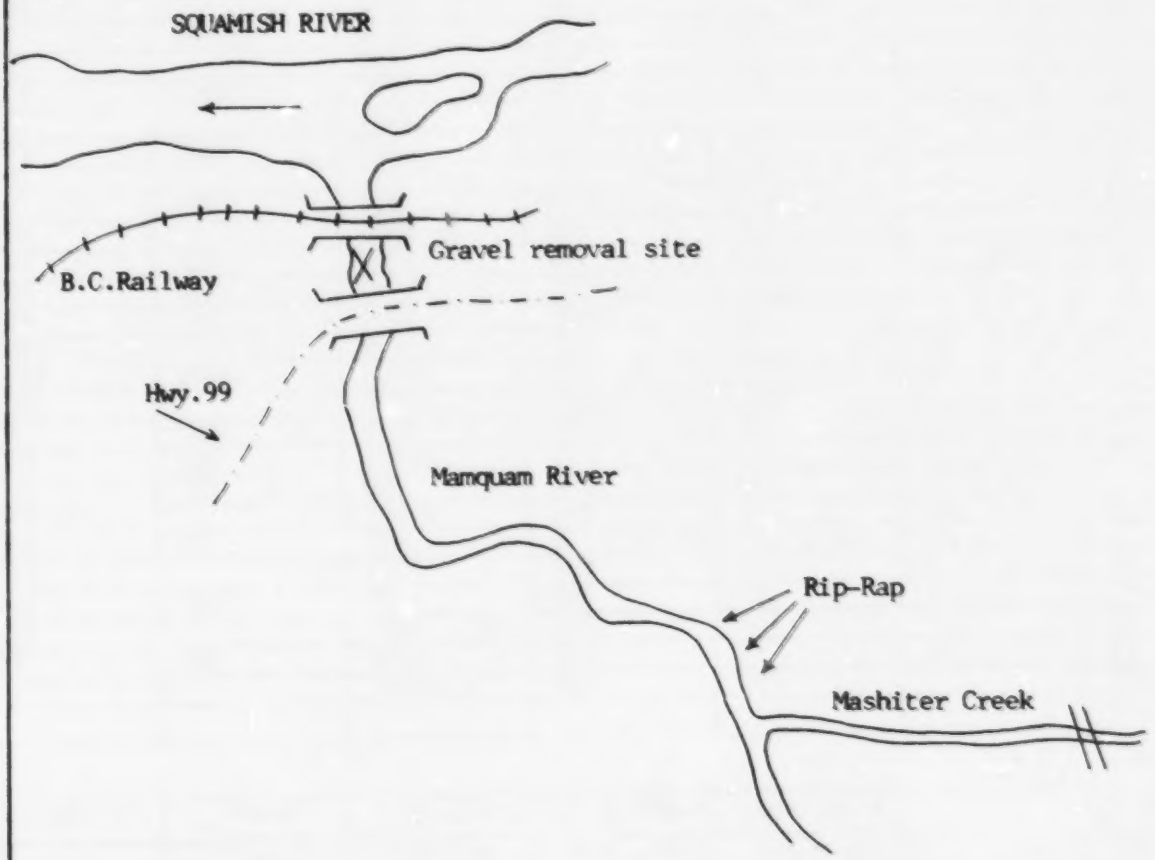
1974 Much gravel shifting due to flash flooding — some 35% area shifted after spawning took place.
1975 60-75% of spawning beds affected during late October.
1980 Heavy siltation late Dec. — much gravel movement. Extremely high W/L in late October.
1982 Some movement and gravel shifting — mainstream relocated 36m closer to South bank just below Mashiter Creek.
1983 Major change in stream course below B.C.Railway Bridge as a result of gravel removal operations.

Biological conditions:

1978 reported some egg-digging due to late fall low water conditions.
1983 Some egg digging, 10%.

Predation: Birds, bears and public harassment.

Sketch of Lower Portion of Mamquam River, 1968



ESCAPEMENT RECORD FOR MAMQUAM RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947		200	400	750	7500	400
48		75	750	1500	N/O	400
49		75	200	1500	7500	75
50		200	200	3500		200
51		200	7500	3500	7500	200
52		75	3500	7500		75
53		200	200	750	3500	200
54		750	1500	3500		200
55		200	1500	3500	750	75
56		75	200	1500		200
57		400	1500	3500	750	200
58		200	750	1500		75
59		200	200	7500	3500	200
60		75	1500	3500		200
61		400	1500	3500	15000	75
62		200	400	400		200
63		200	750	3500	100000+	200
64		75	3500	3500		75
65		750	750	400	3500	200
66		200	400	200		200
67		200	1500	300	500	50
68		100	500	2500		300
69		800	500	10000	500	300
70		1500	8000	25000	N/O	500
71		700	6000	3000	1500	400
72		350	1500	45000		1300
73	12	750	2500	45000	35000	4000
74		400	3000	25000		1500
75		75	750	7500	3500	75
76		400	750	15000	200	400
77	75	200	200	750	750	200
78	80	60	400	30000		150
79		25	200	400	750	200
80		150	500	12000		100
81		150	250	5000	1500	125
82		150	300	6000		125
83	30	50	300	5000	300	75
84		200	400	15000		
85						

TIMING

ARRIVE		M JUL-AUG	M SEPT-E NOV	SEPT-L OCT	E AUG	M FEB
START		JUN-M AUG	SEPT-L NOV	L OCT-NOV	AUG	
PEAK		JUL-E SEPT	SEPT-M DEC	NOV-DEC	SEPT	
END		JUL-L SEPT	OCT-M JAN	DEC-M JAN	OCT	MAY

REMARK

Mamquam Spawning Channel

see

Mamquam River p.87

NAME OF STREAM (Mamquam Spawning Channel) RAB NO. -

LOCAL NAME

DISTRICT _____ STATISTICAL AREA _____ POSITION 49°44'123°09'

LOCATION OF MOUTH Flows into Mamquam River near Squamish Golf and Country Club

LENGTH .80 km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (^oC) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

SPAWNING DISTRIBUTION

Species	Section of Stream Used
sockeye	- throughout channel
coho	- " "
chum	- " "

GENERAL REMARKS

1984 SEP personnel conducted a dead pitch on this system during late 1984 and early 1985

This Channel, developed in 1983, is a cooperative enhancement project between the Small Projects Unit of SEP and the agencies involved in local dyke construction: the Provincial Water Management Branch and the Municipality of Squamish. Material excavated in developing the channel was used to construct an adjacent dyke. The new channel, fed by groundwater, provides 2000 m^2 (about 400 m long by 5 m wide) of new spawning habitat for chum and coho and rearing/overwintering habitat for juvenile coho.

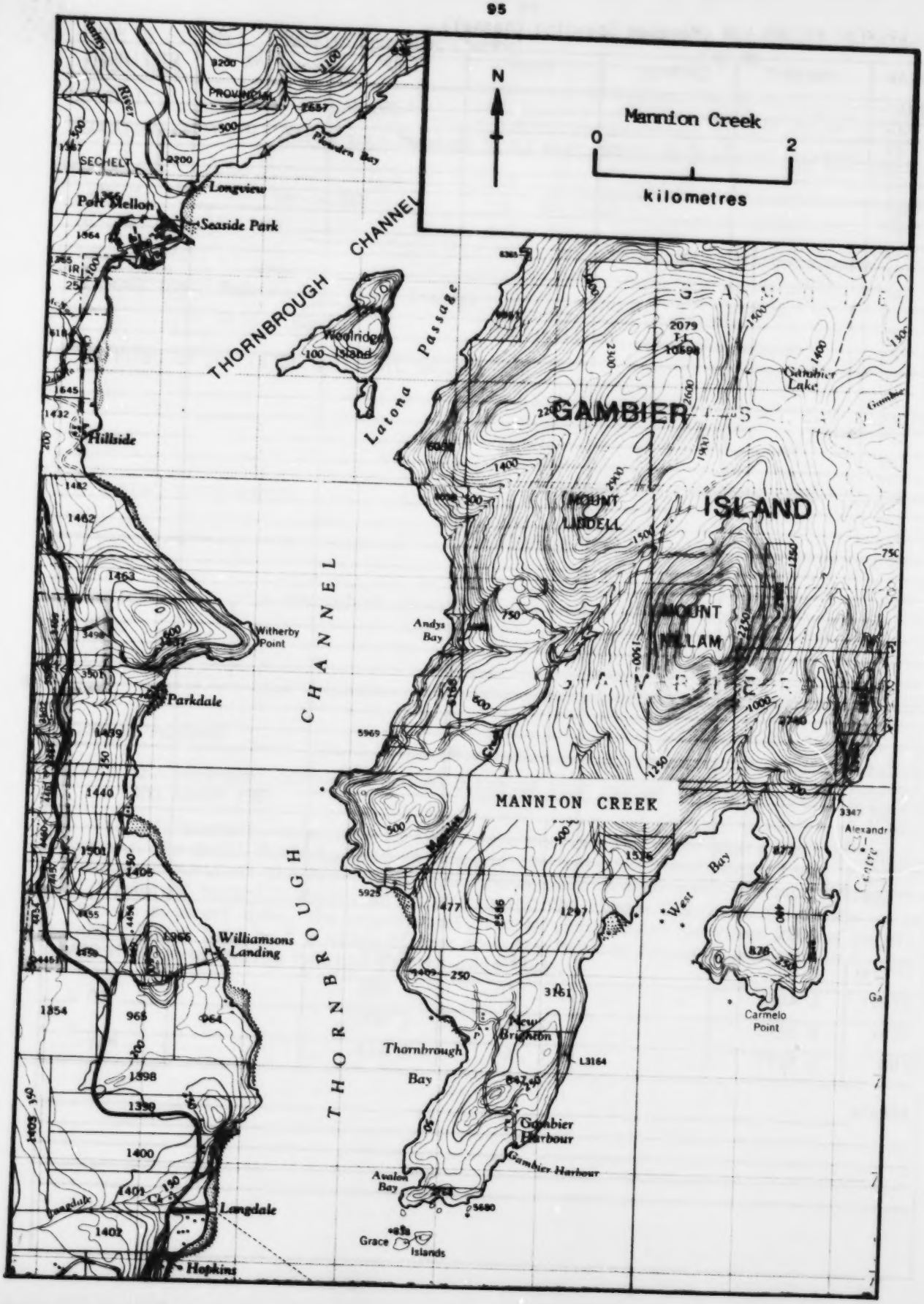
ESCAPEMENT RECORD FOR (Mamquam Spawning Channel)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84	50		100	2000		
85						

TIMING

ARRIVE	M AUG		E DEC	E OCT		M FEB
START	L AUG		L DEC	E NOV		TO
PEAK	E SEPT		E JAN	E DEC		
END	L SEPT		L JAN	E JAN		MAY

REMARK


N
Mannion Creek
0
2
kilometres
SECHELT
Port Mellon
Longview
Seaside Park
Hillside
Woolridge Island
THORNBROUGH CHANNEL
Latona Passage
GAMBIER ISLAND
MOUNT LANDELL
MOUNT MILLAM
Witherby Point
Andys Bay
Parkdale
MANNION CREEK
Williamsons Landing
Thornbrough Bay
New Brighton
Gambier Harbour
Avalon Bay
Grace Islands
Langdale
Hopkins
West Bay
Carmelo Point
Alexandra
Gambier Lake

NAME OF STREAM MANNION CREEK RAB NO. 90-1500-040

LOCAL NAME (Cotton Creek)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°28' 123°27'

LOCATION OF MOUTH Flows S.W. into Thornbrough Channel, S.W.side of Gambier Island, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable rock falls at .80km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- evenly distributed throughout

GENERAL REMARKS

1969 A small stream with .80km of suitable spawning area — remainder is short, steep and unsuitable.

1978 Very poor escapement this year for unknown reasons. Possibly cleaned out by commercial fishery last week in October. Water conditions were ideal.

1980 Heavy scouring of stream bed during December rains. W/L low in Sept.Oct. delayed migration. Water levels abnormally high in December — gravel composition too coarse for spawning in many areas.

1984 Water levels low Jun. to Oct. — human predation.

Seasonal fluctuations in water levels.

Light predation.

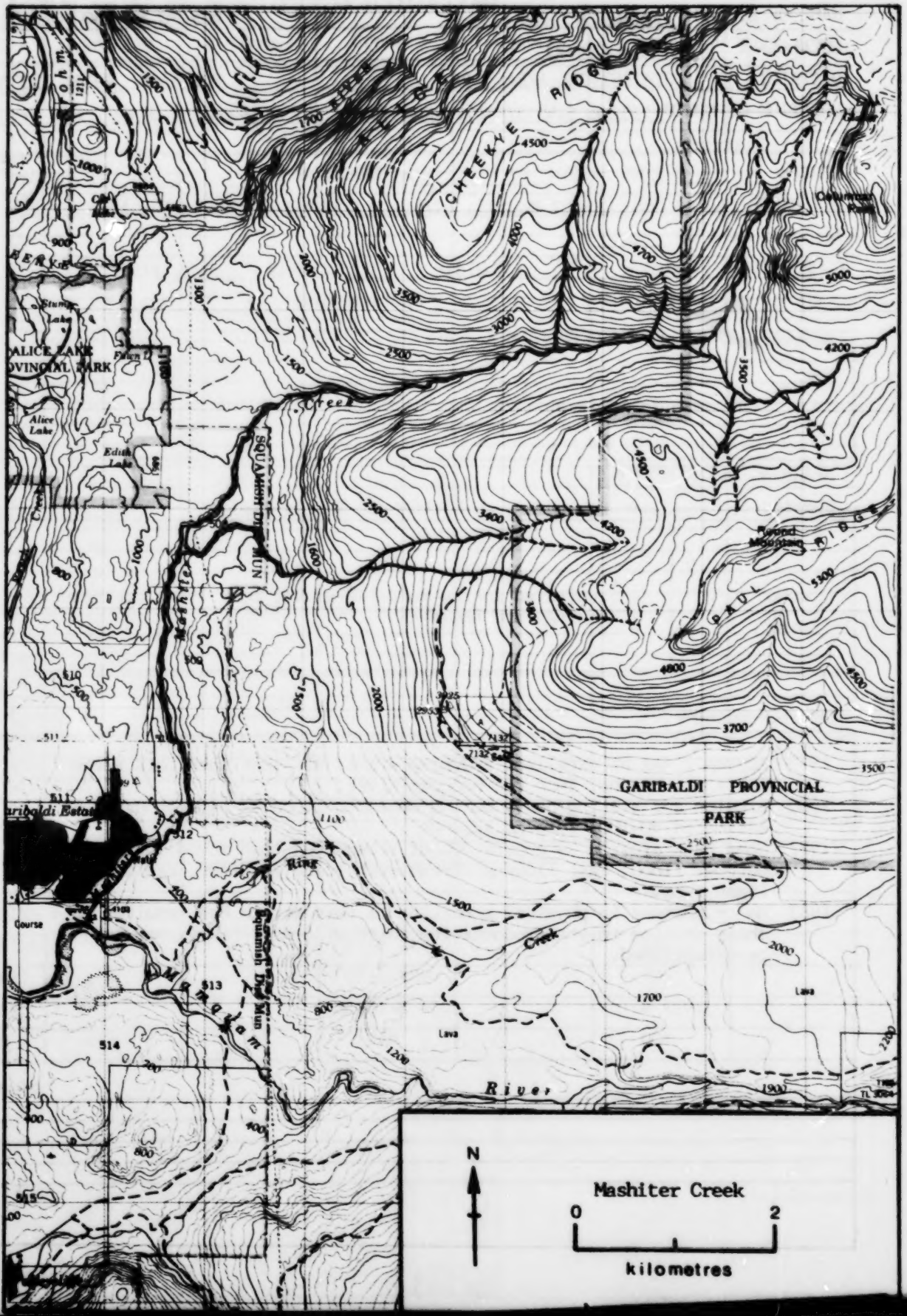
ESCAPEMENT RECORD FOR MANNION CREEK (Cotton Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68		NO RECORDS PRIOR TO 1969				
69				500		
70				200		
71				100		
72				250		
73				750		
74				75		
75				400		
76				125		
77				750		
78				90		
79				175		
80				150		
81				300		
82			65	50		
83				400		
84				350		
85						

TIMING

ARRIVE				M OCT-M NOV		
START				E-M NOV		
PEAK				M NOV-M DEC		
END				M-L DEC		

REMARK


GARIBALDI PROVINCIAL PARK
Mashiter Creek
N
0
2
kilometres

NAME OF STREAM MASHITER CREEK RAB NO. 90-1300-020-010

LOCAL NAME (Little Creek)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°44' 123°04'

LOCATION OF MOUTH Flows S.W. into Mamquam River, E. of Squamish River, New West. District.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX 44.2 Nov. 3, 1975 MIN 0.289 Sept. 16, 1973

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable falls at 1.20

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- scattered in the suitable gravel beds lying upstream of logs and boulders.
pink	- " " " " "

GENERAL REMARKS

1979 Approx 2.4km of excellent spawning gravel was lost when this creek cut a new channel into the Mamquam River.

1980 Erosion and silting heavy during December flood — some scouring — estimated 90-100% loss of spawn.

1982 Some bank erosion — approx 30% of stream bed load moved during late October flood. Fast flowing stream with steep gradient, can only support light runs.

1983 Major changes in physical condition of this stream has resulted in a sharp decline in its productivity which will most likely not be re-established.

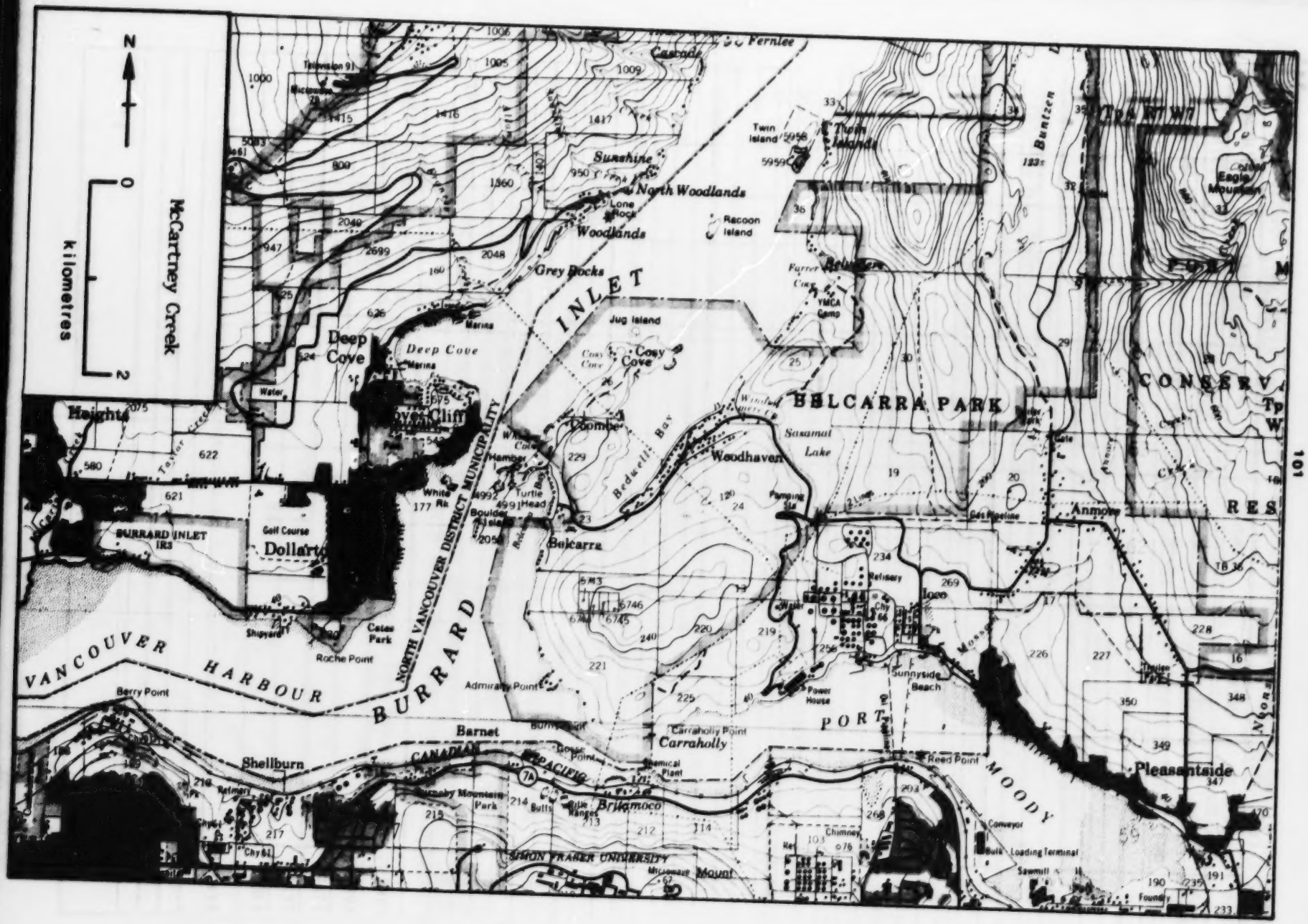
ESCAPEMENT RECORD FOR MASHITER CREEK (Little Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			25	25	25	
80			25	N/0		
81			25		75	
82			20	50		
83			20			
84			100			
85						

TIMING

ARRIVE			OCT-E NOV		JUL	
START			OCT-L NOV		AUG	
PEAK			M NOV-M DEC		M SEPT	
END			JAN		OCT	

REMARK


N
0
2
kilometres
McCartney Creek
INLET
BURRARD
VANCOUVER HARBOUR
BELCARRA PARK
Deep Cove
Cove
Jug Island
Cascade
Fernlee
Sunshine
North Woodlands
Woodlands
Lone Rock
Racoon Island
Twin Islands
Grey Rocks
YMCA Camp
Marina
Deep Cove Marina
Cosy Cove
Bedwell Bay
Woodhaven
Sasamat Lake
Belcarra
Dollarton
Golf Course
BURRARD INLET IR3
Shipyard
Cates Park
Roche Point
Berry Point
Admiralty Point
Barnet
Shellburn
Burnaby Mountain Park
CANADIAN PACIFIC
Brunette
Carraholly Point
Carraholly
Chemical Plant
Reed Point
Pleasantside
Sunnyside Beach
Power House
Refinery
Loco
Anmore
Belcarra Park
Eagle Mountain
Conveyor
Loading Terminal
Sawmill
SIMON FRASER UNIVERSITY
Mount
NORTH VANCOUVER DISTRICT MUNICIPALITY
PORT MOODY

NAME OF STREAM McCARTNEY CREEK RAB NO. 90-0690

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°19' 123°00'

LOCATION OF MOUTH Flows S. into Vancouver Harbour

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable steep incline at .40m

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- unknown

GENERAL REMARKS

First Report: 1982 Water levels low June - September.
1984 Water levels low June - October, predation by humans.

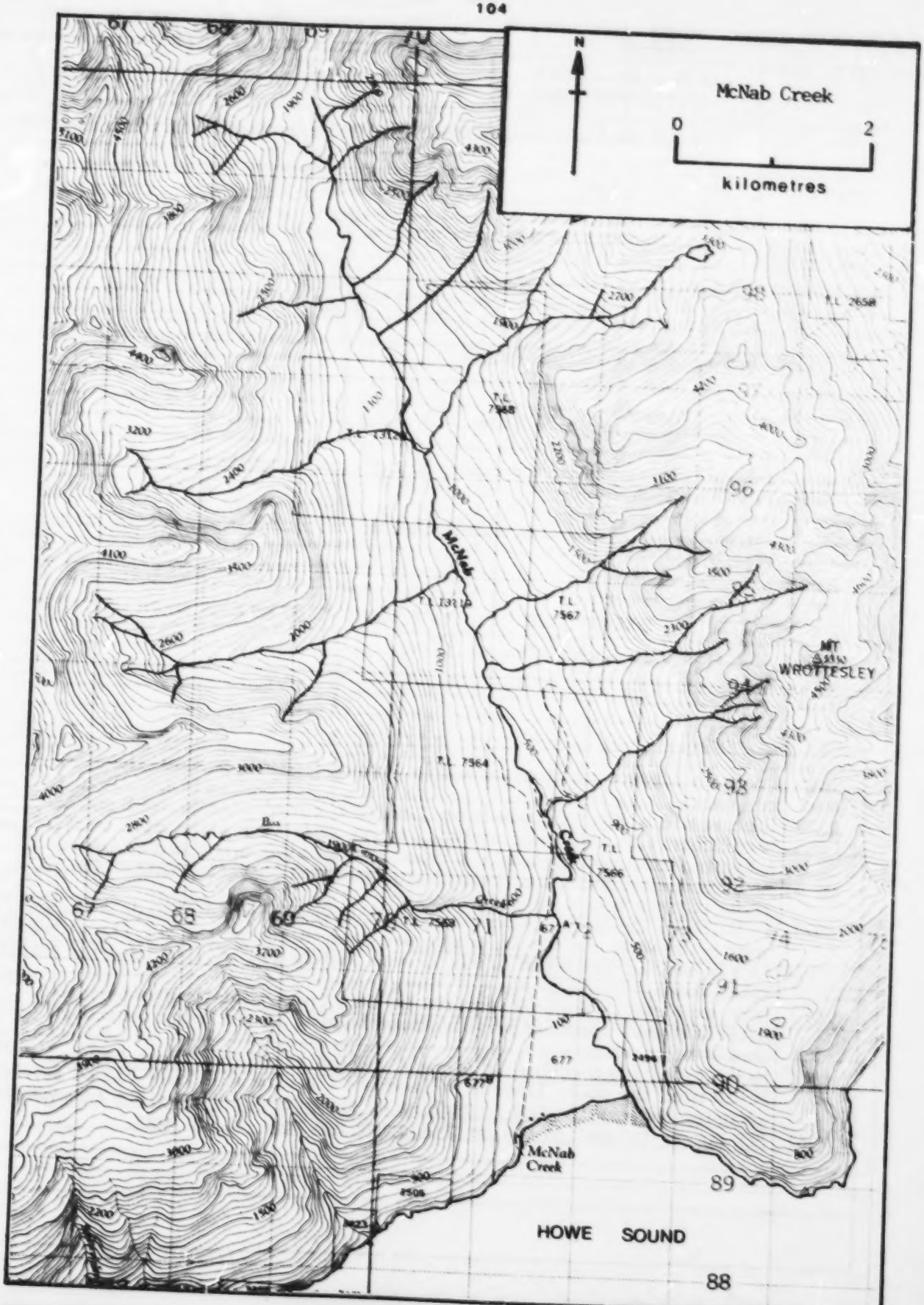
ESCAPEMENT RECORD FOR McCARTNEY CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83			22			
84			13			
85			39			

TIMING

ARRIVE			SEPT-M OCT			
START			SEPT-E NOV			
PEAK			OCT-L NOV			
END			NOV-L DEC			

REMARK


N
McNab Creek
0
2
kilometres
MT
WROTTESLEY
McNab
Creek
HOWE SOUND

NAME OF STREAM McNAB CREEK RAB NO. 90-1370

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°33' 123°24'

LOCATION OF MOUTH Flows S. into Thornbrough Channel, N. of Gambier Isl., New West. Dist.

LENGTH 4 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable falls at 6.3km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- concentrated in small tributary .80 km from mouth
pink	- in lower .80km

GENERAL REMARKS

This stream is subject to flooding and has changed course several times over the years.

1969 Some sections of the stream have excellent gravel. Gravel bars and minor debris in the lower reaches. As one point,where the road parallels a canyon, road material spills close to the creek and could become a problem during periods of heavy rain.Recommend that close attention be given to this potential slide area.

1973 In October, dredging operations on this stream were completed. A channel approx 18m wide and 61m in length was dredged out of the mud flats immediately east of the mouth of the creek. The channel will be used for mooring small boats.

1979 More exploratory work is required on this creek to determine arrival dates and peak spawning periods. Some logging in the upper watershed should be watched.

1980 Majority of spawn occurs in a small unnamed creek that flows into McNab near the power lines.High December flooding will have caused severe scouring and erosion.SEP in looking at this creek for possible enhancement.

1982 SEP put an incubation box on this creek and took 40,000 eggs.

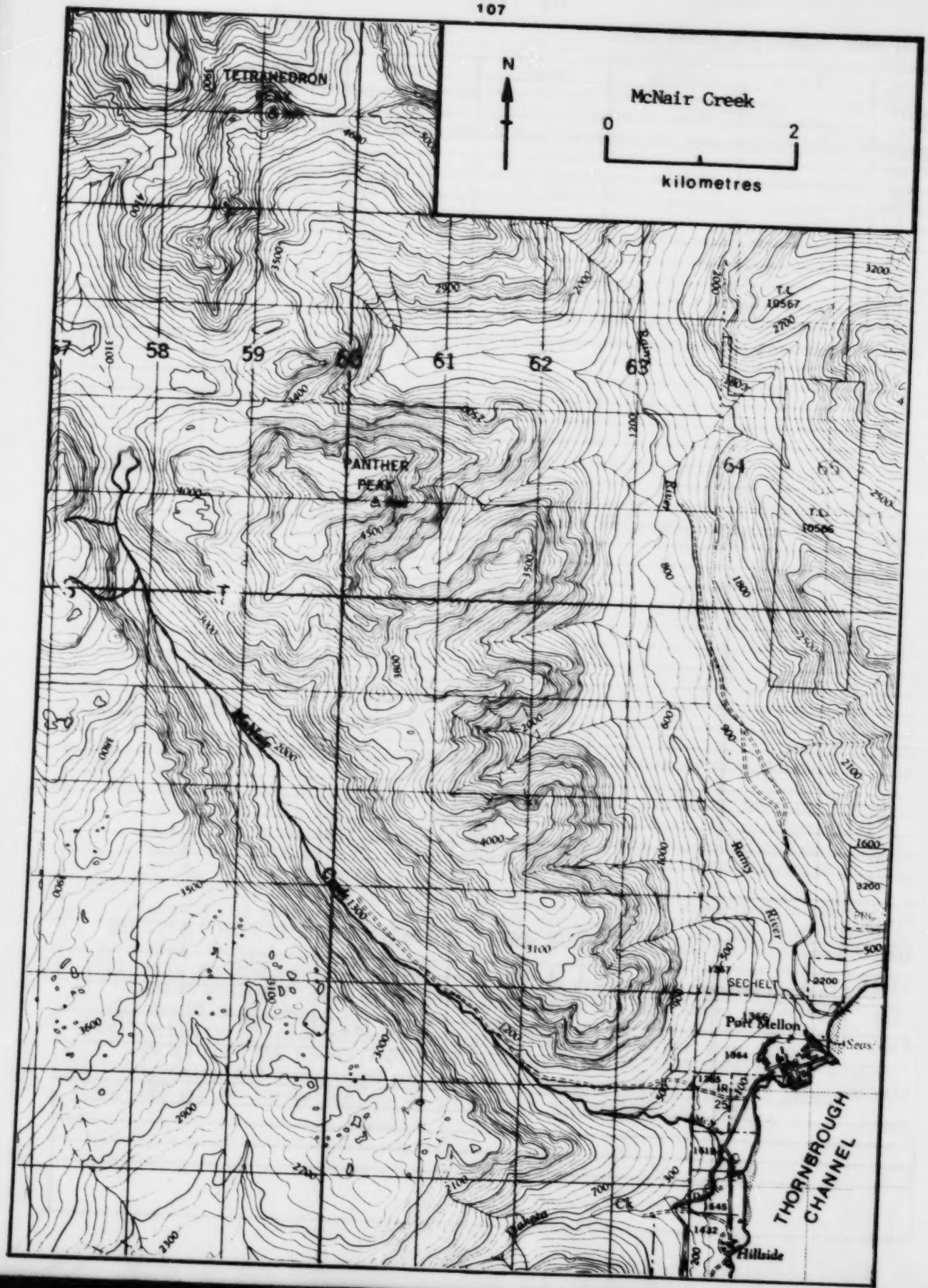
ESCAPEMENT RECORD FOR McNAB CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50				75		
51				1500	3500	
52				75		
53				25	3500	
54				25		
55					200	
56						
57				400	400	
58				200		
59				75	75	
60				200		
61				25	25	
62				25		
63				200	25	
64				200		
65				25	25	
66				75		
67				100	50	
68				450		
69				200	50	
70			200	600		
71			150	150		
72						
73			350	350		
74			75	400		
75			25	75	N/0	
76			25	75	N/0	
77			200	1500	25	
78			175	1500		
79		6	150	600		
80			150	1200		
81				1500		
82			N/0	500		
83			100	300		
84			100	2000		
85						

TIMING

ARRIVE			E NOV	E-M OCT		JAN
START			E NOV	SEPT-L OCT	AUG	
PEAK			L NOV-E DEC	L OCT-M NOV	SEPT	
END			E-M DEC	NOV-L DEC	OCT	APL

REMARK


N
McNair Creek
0
2
kilometres
TETRAHEDRON
PANTHER PEAK
57
58
59
60
61
62
63
64
SECHELT
Port Mellon
THORNBROUGH CHANNEL
Hillside
Seas
Roberts Creek
Ramsy River

NAME OF STREAM McNAIR CREEK

LOCAL NAME _____ RAB NO. 90-1430

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 31′ 123° 30′

LOCATION OF MOUTH Flows S.E. into Thornbrough Channel, W. of Gambier Isl.
New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____
Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Rock falls at 4.8km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- in lower reaches
chum	- in lower reaches

GENERAL REMARKS

1972 First report of any salmon for some years.
1973 Spawning areas well separated by steep and rocky sections.
1974 Series of old dams hinder the recruitment of gravel for spawning beds in lower reaches. In Jan, silt from the Dept. of Highways excavations was released into the stream.
1979 Some logging in the upper watershed. High water in December may have caused some damage.
1984 New spawning area developed by high water forming side channel below highway.

ESCAPEMENT RECORD FOR McNAIR CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69			NO RECORDS PRIOR TO 1970			
70			N/O	N/O		
71			N/O	N/O		
72				10		
73				6		
74			25	25		
75			UNK	UNK		
76				N/O		
77				N/O		
78			N/O	N/O		
79			N/O	20		
80			N/O	N/O		
81			N/O			
82			N/O	N/O		
83			UNK	N/O		
84			UNK	50		
85						

TIMING

ARRIVE			L SEPT	E-M OCT		
START			E OCT	L OCT-E NOV		
PEAK			L OCT	E-M NOV		
END			E DEC	L NOV-M DEC		

REMARK

Meighan Creek

see

Loggers Lane Creek p.73

NAME OF STREAM (Meighan Creek) RAB NO. 90-1300-027

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°44' 123°09'

LOCATION OF MOUTH Flows W. near Trailer Park at mouth of Mamquam River.

LENGTH 4 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^oC)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- all spawning observed in the vicinity of coho park
chum	- " " " "

GENERAL REMARKS

1979 This stream was formerly included with Squamish River runs.
Water levels normal — fish harassment by people and dogs.

ESCAPEMENT RECORD FOR (Meighan Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			25			
80			50			
81			25			
82			-	-		
83			-	-		
84			25	200		
85						

TIMING

ARRIVE			OCT-L NOV	E NOV		
START			OCT-L NOV	M NOV		
PEAK			E NOV-M DEC	E DEC		
END			L NOV-E JAN	M DEC		

REMARK

N
Mosquito Creek
0
10
kilometres
Lionsview
Capilano
Lower Capilano
NORTH VANCOUVER
Calamity Pt
Gumboot Bank
Brockton Pt
Burnaby Shoal
Deadman I
Lost Lagoon
Lynnmour
BURRARD INLET
HARBOUR

NAME OF STREAM MOSQUITO CREEK RAB NO. 90-0850

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°19′ 123°05′

LOCATION OF MOUTH Flows S. through North Vancouver into Burrard Inlet, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX 11.8 Jan. 19, 1968 MIN 0.150 Aug. 11, 1968

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

passable to Hwy. 401 — culvert at 1.6km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- evenly distributed

GENERAL REMARKS

1956 This stream is being continuously cleared as a flood control measure and very little area is left for spawning.

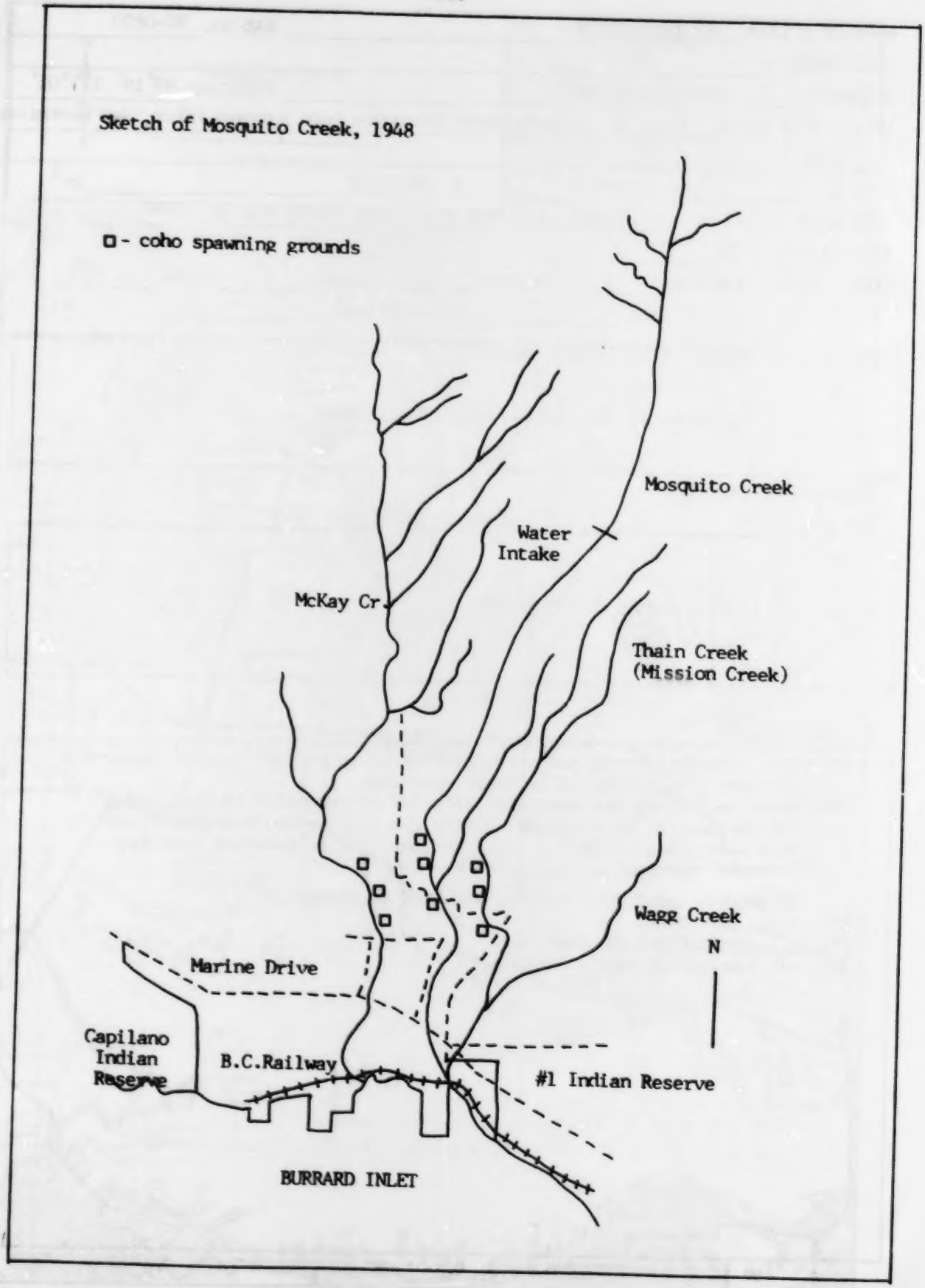
1958 Water conditions are seriously affected by extensive land clearing and residential development. During the past dry season the stream beds were practically dry and a serious loss in resident coho fry is to be expected.

No records until 1981 — flow affected by diversion.

1982 Human predation.

1983 W/L abnormally high Sept.-Nov.

1984 W/L low during June - October.


Sketch of Mosquito Creek, 1948
□ - coho spawning grounds
Mosquito Creek
Water Intake
McKay Cr
Thain Creek (Mission Creek)
Wagg Creek
N
Marine Drive
Capilano Indian Reserve
B.C.Railway
#1 Indian Reserve
BURRARD INLET

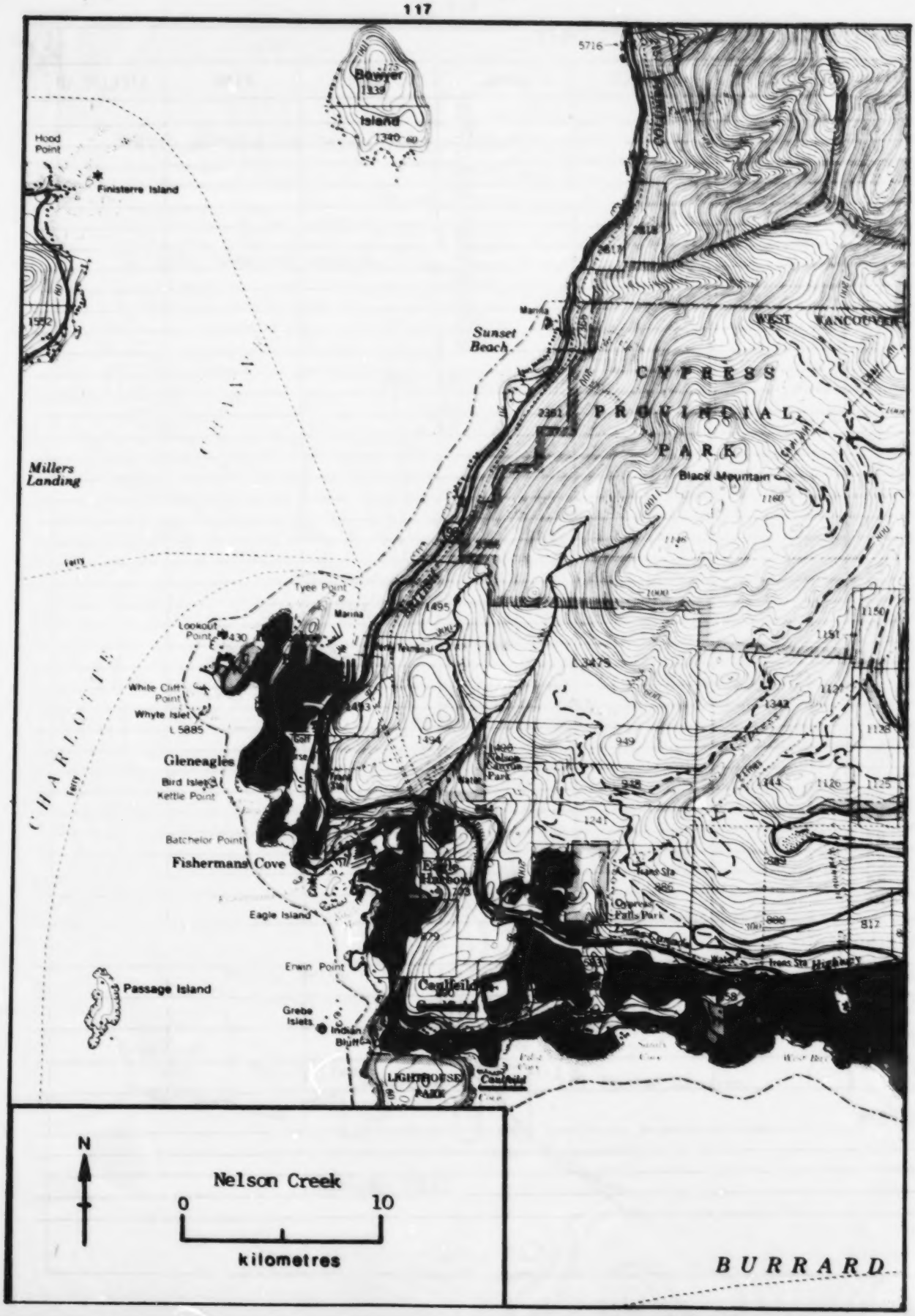
ESCAPEMENT RECORD FOR MOSQUITO CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25			
48			25			
49			25			
50			25			
51			75			
52			25			
53			25			
54			25			
55			25			
56			25			
57			25			
58			25			
59						
60		NO RECORDS AFTER 1958				
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82			4			
83			4			
84			3			
85			2			

TIMING

ARRIVE						
START			M SEPT-E OCT			
PEAK			OCT			
END			L OCT-NOV			

REMARK


Bowyer Island
Hood Point
Finisterre Island
Sunset Beach
WEST VANCOUVER
CYPRESS PROVINCIAL PARK
Black Mountain
Millers Landing
Tyee Point
Marina
Lookout Point
White Cliff Point
Whyte Islet
L 5885
Gleneagles
Bird Islets
Kettle Point
Batchelor Point
Fishermans Cove
Eagle Island
Erwin Point
Passage Island
Grebe Islets
Indian Bluff
LIGHTHOUSE PARK
CHARLOTTE
Nelson Creek
N
0
10
kilometres
BURRARD

NAME OF STREAM NELSON CREEK RAB NO. 90-0990

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°21′ 123°16′

LOCATION OF MOUTH Flows S.W. into Fisherman's Cove, N. of Pt. Atkinson, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^oC) .

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:
Rock falls at 1.6km
Impassable sluiceway at Marine Drive during low flows
Impassable road culvert on Cranley Dr. at 609m
Impassable sluiceway under P.G.E.trestle in Nelson Canyon at 762m
Impassable bridge at 68m

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- scattered on available gravel

GENERAL REMARKS

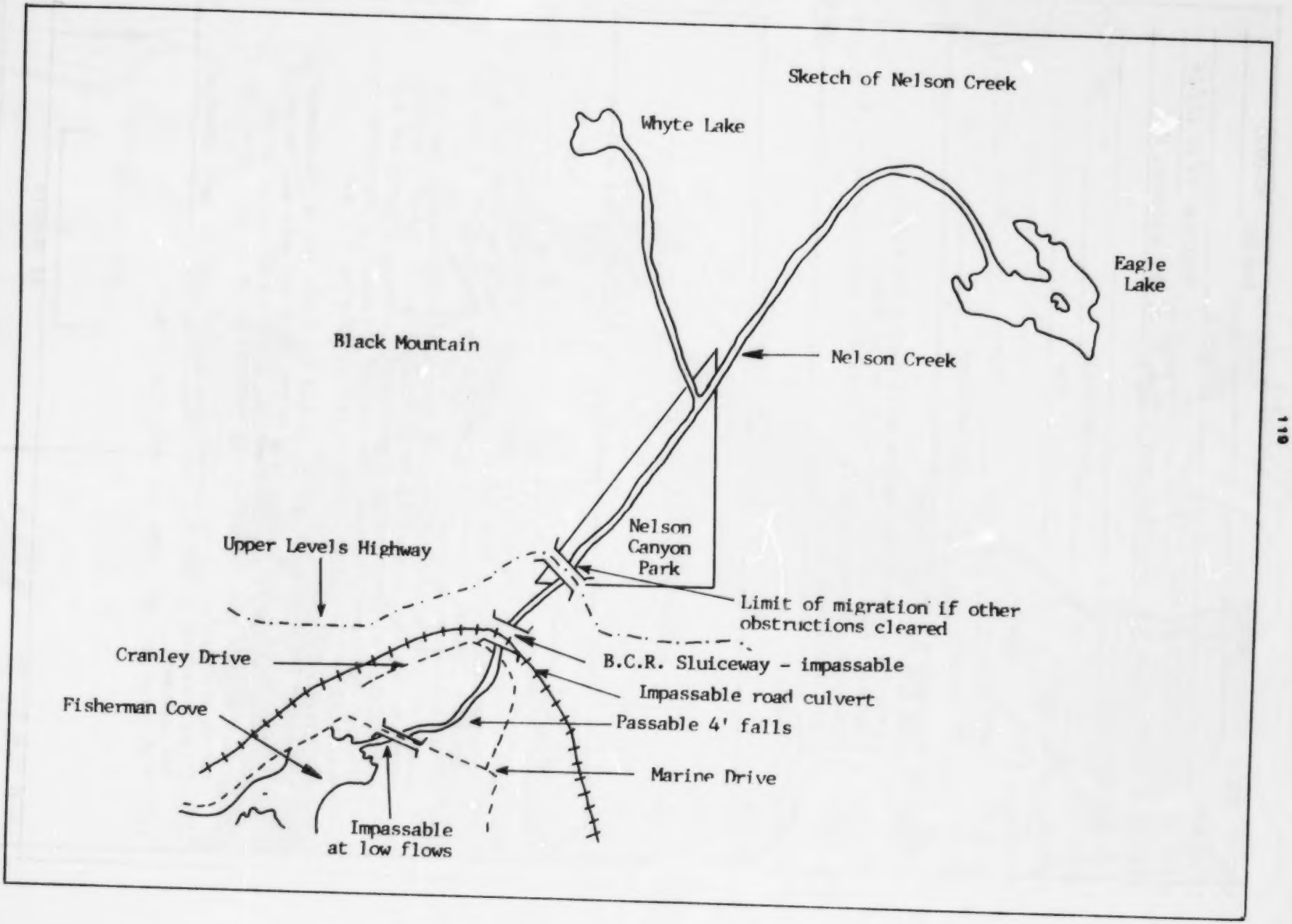
1958 This stream is subject to very low flows each year until the late fall rains commence. Water from Eagle Lake and the mainstem above the upper limit of migration is dammed and used for the municipality of West Vancouver's domestic water supply.

1959 Fisheries Officers reported that this stream was unsuitable for chum salmon propogation because of deforestation, water draw-off, housing, commercial development and poor passage at culverts. Logging and subdivision development has been responsible for denuding the forest cover resulting in extremes of discharge, gravel scouring and water temperature problems.

1967 Thunderbird Marine operators eliminated the lower 76m of the stream by dredging to enlarge the bay. As a result, fish are only able to enter the creek when the tides are above 14' (4.3m). A biological study conducted this year concluded that rehabilitation of this stream would not be practical.

1979 Slight scouring — approx 25% of spawn lost. Juveniles have killed a few spawners.

1981 High water late Oct. 1984 Low water Jun. - Oct.


Sketch of Nelson Creek
Whyte Lake
Eagle Lake
Black Mountain
Nelson Creek
Nelson Canyon Park
Upper Levels Highway
Limit of migration if other obstructions cleared
Cranley Drive
B.C.R. Sluiceway - impassable
Impassable road culvert
Fisherman Cove
Passable 4' falls
Marine Drive
Impassable at low flows

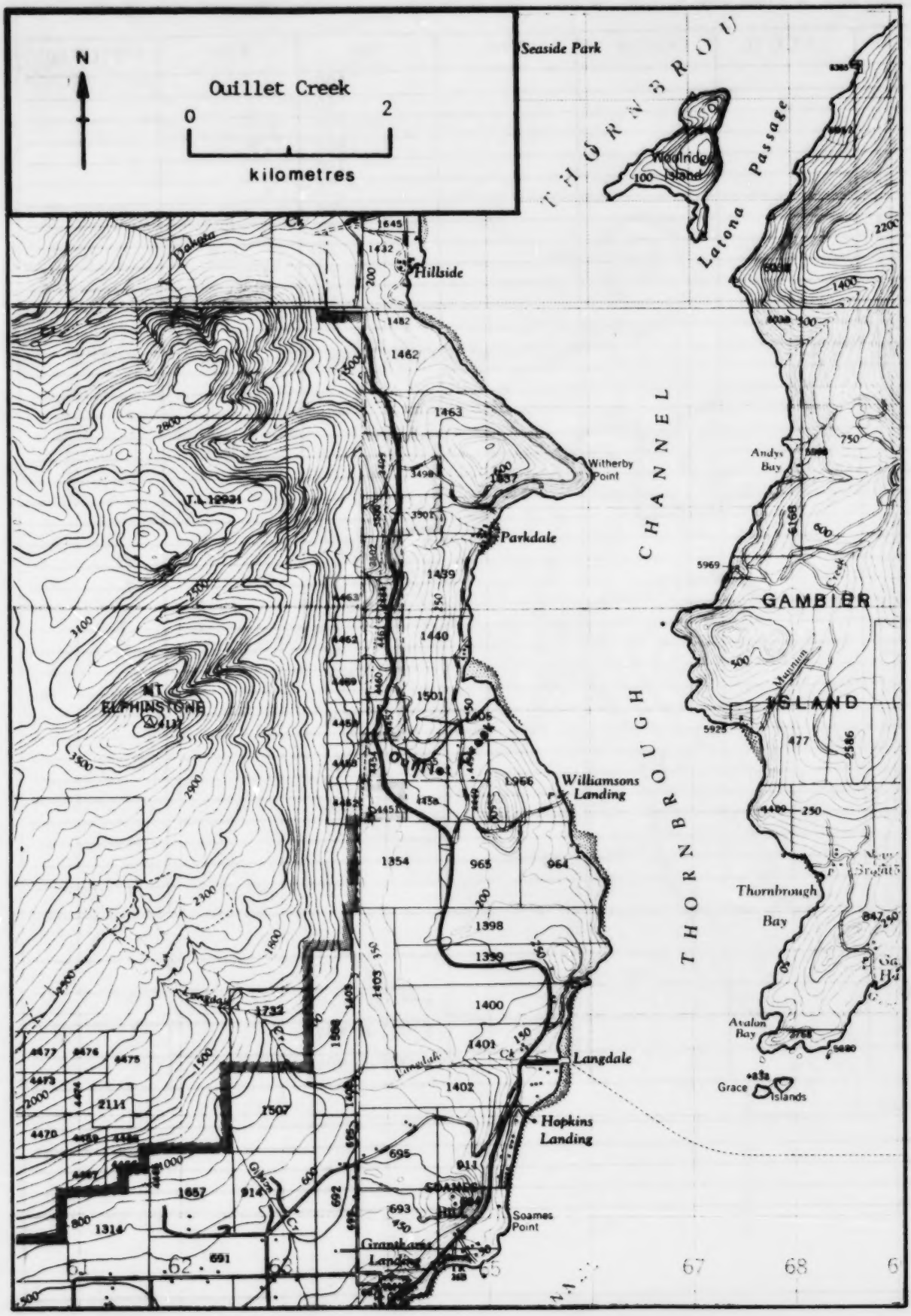
ESCAPEMENT RECORD FOR NELSON CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947				400		
48				750		
49				750		
50				1500		
51				750		
52				25		
53				400		
54				750		
55				35		
56				25		25
57				25		
58				25		
59			NO RECORDS FROM 1959 - 1969			
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70				75		
71				30		
72				75		
73				35		
74				25		
75				N/0		
76						
77				N/0		
78						
79				50		
80				6		
81				6		
82				N/0		
83				-		
84				3		
85						

TIMING

ARRIVE						
START				E-M OCT		
PEAK				E OCT-M NOV		
END				L OCT-L NOV		

REMARK


N
Ouillet Creek
0
2
kilometres
Seaside Park
THORNBROUGH
Woolridge Island
Latona Passage
Hillside
Witherby Point
Parkdale
CHANNEL
Andys Bay
GAMBIER
ISLAND
Mt ELPHINSTONE
Williamsons Landing
Thornbrough Bay
Avalon Bay
Grace Islands
Langdale
Hopkins Landing
Soames Point
Granthams Landing
61
62
66
67
68

NAME OF STREAM OUILLET CREEK RAB NO. 90-1490

LOCAL NAME (Oulette Creek, Jap Creek)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°28'123°29'

LOCATION OF MOUTH Flows into Thornbrough Channel, N. of Williamsons Landing, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

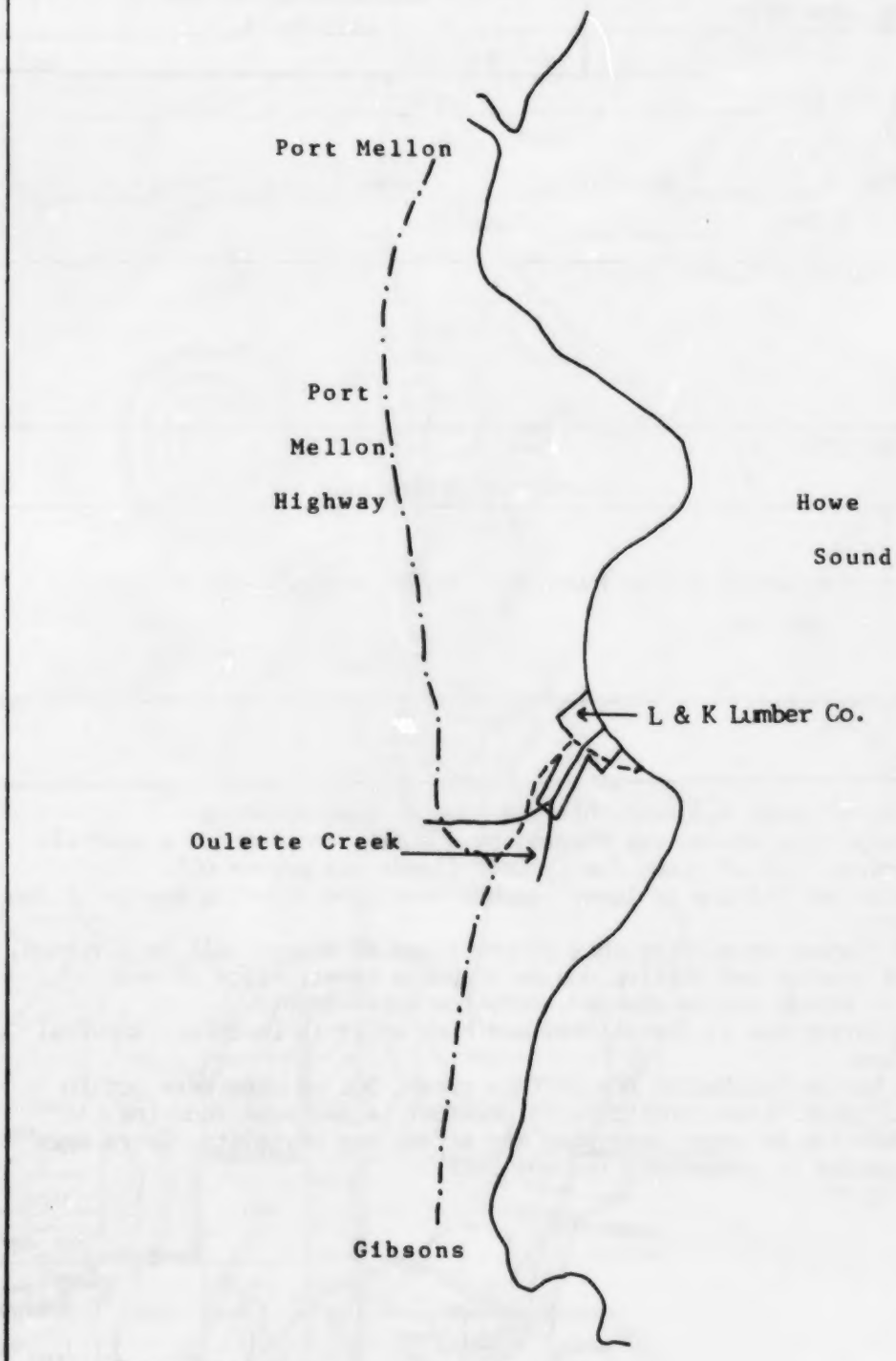
SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- spawning to the lower hwy. bridge approx .40km from mouth
coho	- unknown

GENERAL REMARKS

1968 A 20% loss of spawn occurred this year due to over spawning.
1969 The mouth of this stream was cleared by a lumber company for a sawmill.
1972 The estimated loss of spawn due to Dec. floods was approx 40%.
1973 10% erosion and silting in lower reaches — slight scouring approx 1.2km from mouth.
1977 L. and K. Lumber developing this property and #1 stream will be diverted.
1978 Extensive erosion and silting due to Highways Construction of new culvert -- stream course changed, very low water levels.
1979 Severe scouring due to instability and high water in December. Survival will be low.
1980 B.C.I.T. has an incubation box on this creek, but no eggs were put in this year. High flood conditions in December caused some scouring.
1984 Extreme silting in upper watershed may affect egg mortality. Extra eggs were incubated to compensate for any loss.

Sketch of Oulette Creek, 1969



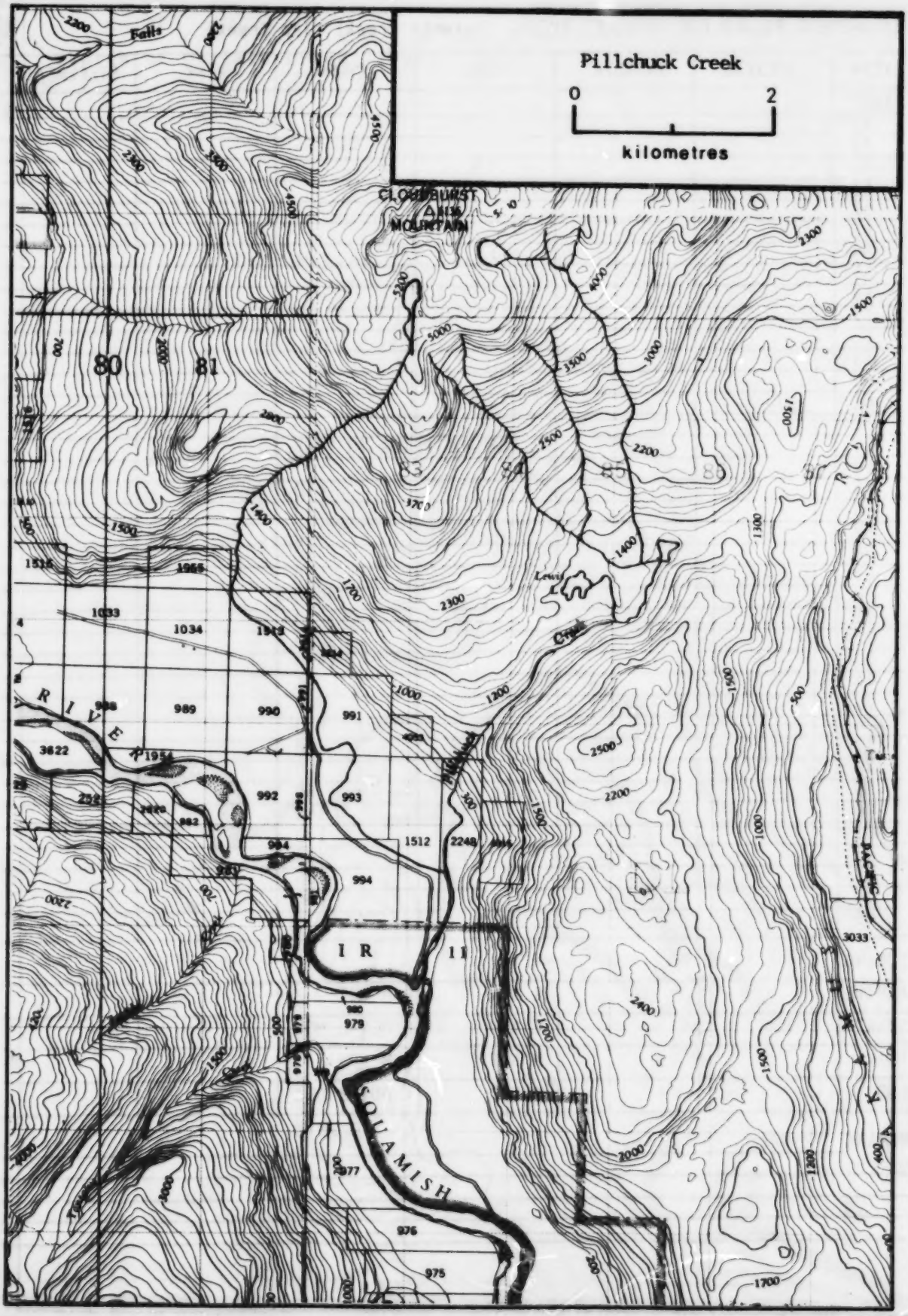
ESCAPEMENT RECORD FOR (OUILLET CREEK) (Oulette Creek) (Jap Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63			NO RECORDS PRIOR TO 1965			
64						
65				450		
66				800		
67				100		
68				2400		
69				500		
70				4000		
71				3000		
72				3000		
73				1500		
74				25		
75				200		
76				N/0		
77				400		
78			6	50		
79			10	60		
80			N/0	150		
81			20	130		
82			N/0	45		
83			20	100		
84			50	750		
85						

TIMING

ARRIVE			E NOV	E-M OCT		
START			E NOV	E OCT-L NOV		
PEAK			M NOV	E-M NOV		
END			M DEC	L NOV-M DEC		

REMARK


Pillchuck Creek
0
2
kilometres
CLOUDBURST
MOUNTAIN
80
81
RIVER
SQUAMISH
IR 11
PACIFIC

NAME OF STREAM PILLCHUCK CREEK RAB NO. 90-1300-100

LOCAL NAME (Pilchuck Creek)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°52′ 123°14′

LOCATION OF MOUTH Flows S.W. into Squamish River, N.W. of mouth of Cheakamus R. New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable rock falls at 3.2km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- scattered mainly in the area of Cloudburst Mountain
chum	- scattered mainly in the area of Elizabeth Creek.

GENERAL REMARKS

1955 30% of the stream bed was scoured during flooding in early Nov. and an estimated 40% of the coho spawn was lost. Most of the chum entered after the flood.

1971 This stream flows slowly along the flats up to 4.8km. Heavy deposits of mud and silt can be found between the scattered gravel beds.

1977 There are 3 small streams and one large stream on this system. The largest stream is Cloudburst Creek and is about 6.4km long. It is in this stream that the majority of coho spawn. The chum are mostly in the lower reaches of the Pillchuck itself.

Seasonal fluctuation in water levels.

Some predation by bears and dogs.

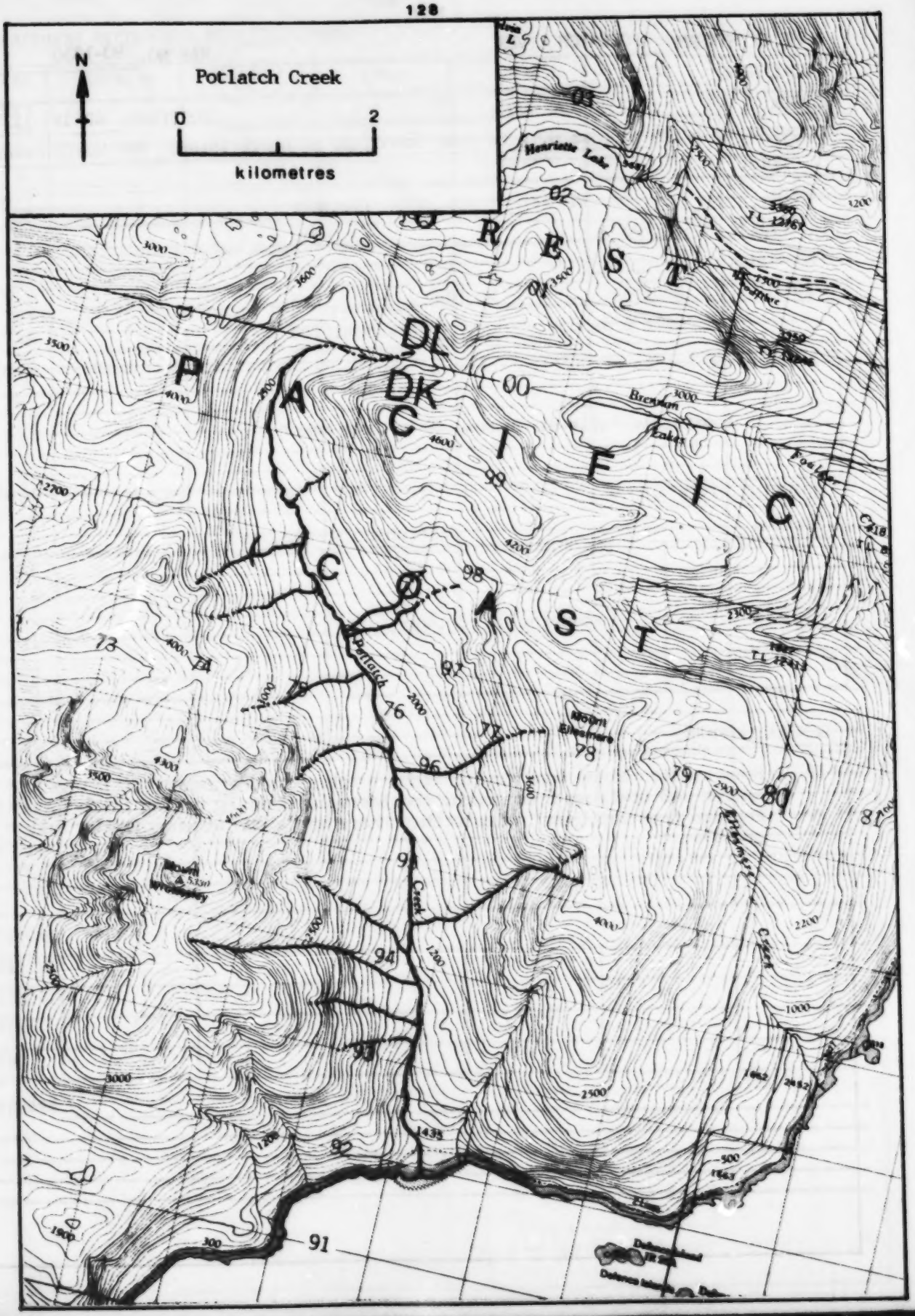
ESCAPEMENT RECORD FOR PILLCHUCK CREEK (Pilchuck Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	25		
48			400	75		
49			400	75		
50			75	75		
51			750	75		
52			750	75		
53			750	75		
54			400	75		
55			400	75		
56			25	25		
57			400	200		
58			200	75		
59			750	750		
60			25	25		
61			200	25		
62			750	25		
63			25	25		
64			400	25		
65			750	25		
66			25	25		
67			50	50		
68			500	100		
69			50	50		
70			200	300		
71			200	200		
72			200	700		
73			300	350		
74			750	200		
75			1500	200		
76			1500	200		
77			1500	200		
78			75			
79			75	25		
80			1000	600		
81			250	300		
82			50	100		
83			50	-		
84			100	N/A		
85						

TIMING

ARRIVE			E OCT	M-L OCT		
START			OCT-M NOV	L OCT-NOV		
PEAK			OCT-M DEC	NOV-E DEC		
END			NOV-E JAN	L DEC-M JAN		

REMARK


N
Potlatch Creek
0
2
kilometres
R E S T
DL
DK
P A C I F I C
C O A S T
Potlatch
Creek
Henriette Lake
Brenham
Lakes
Mount Ellerslie
Mount Brodeur
5330
Ellerslie
Brodeur
Peninsula
Dolomite Islands
91
92
93
94
95
96
97
98
99
00
01
02
03
72
73
76
78
79
80
81

NAME OF STREAM POTLATCH RIVER RAB NO. 90-1350

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°35′ 123°19′

LOCATION OF MOUTH Flows S. into Howe Sound, N. of Anvil Island, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable falls at approx .40 km from mouth

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- spawning up to .40km

GENERAL REMARKS

1977 Some erosion along bank during flood — this occurs near foot bridge approx .40 upstream from mouth. Considerable scouring during flash floods. Reports from watchman indicate that there was a run of chum in the fall of 1976.

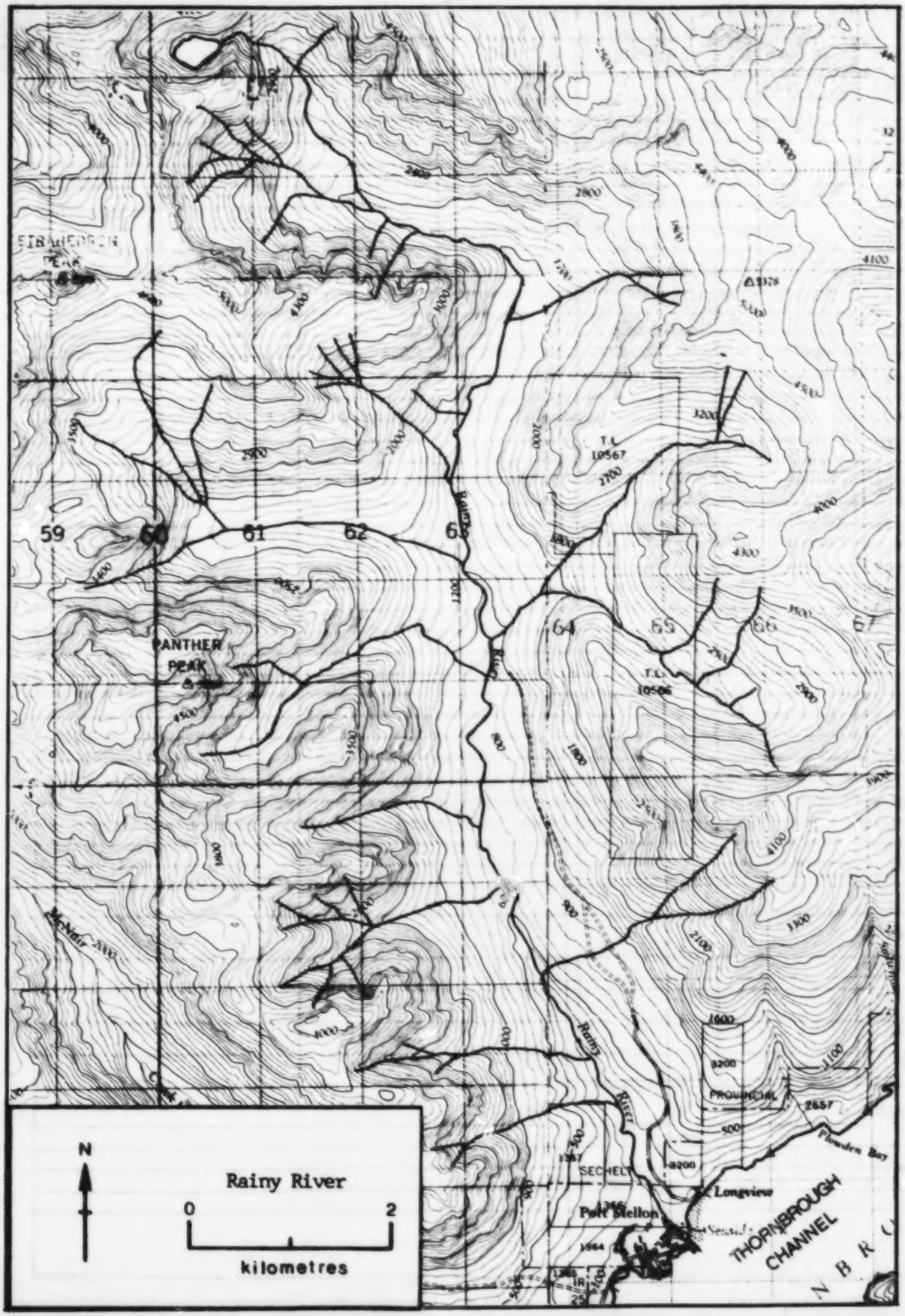
ESCAPEMENT RECORD FOR POTLATCH CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78				50		
79				-		
80				-		
81				-		
82				-		
83				-		
84				75		
85						

TIMING

ARRIVE				L OCT		
START				L OCT		
PEAK				L OCT		
END				NOV		

REMARK


59
60
61
62
63
64
65
66
67
PANTHER PEAK
T.L. 10567
T.L. 10586
Rainy River
PROVINCIAL
SECHELT
Port Mellon
Longview
THORNBROUGH CHANNEL
Pleasden Bay
N
Rainy River
0
2
kilometres

NAME OF STREAM RAINY RIVER RAB NO. 90-1400

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°31' 123°29'

LOCATION OF MOUTH Flows S.E. into Thornbrough Channel at Port Mellon, New Westminster, B.C.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 428 Dec. 1, 1958 MIN 0 Sept. 30, 1963

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable rock falls at 4.8km

dam with fish ladder at 1.20km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- below dam
coho	- evenly distributed, some above dam

GENERAL REMARKS

A diversion dam was built approx 1.2km from mouth to facilitate the water requirements of a pulp mill constructed at the mouth prior to 1930.
A Denile-type fishway was constructed in 1954 to assist fish passage.
No records between 1946 and 1971.

1971 Coho observed above the dam, chum salmon in stream just above tidal influence. Large stockpile of gravel behind dam — lower reaches below dam very poor spawning ground — heavy boulders with a few patches of suitable gravel in between boulders. Ladder should be inspected to see if an improved design would facilitate passage. River above dam should be checked to see if improvements to the ladder are warranted.

1978 Several sheets of plywood removed from ladder intake at dam location. Ladder impassable due to screen not having been cleaned out.

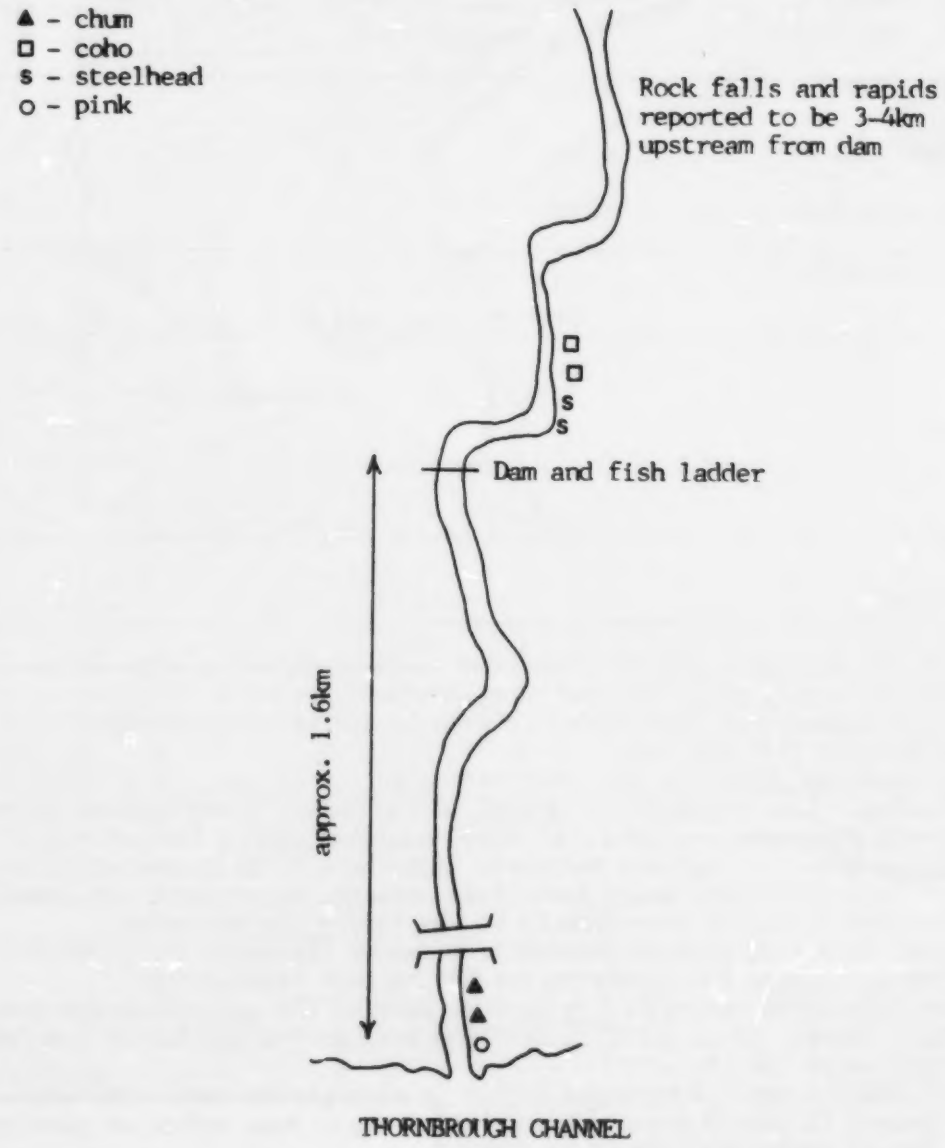
1979 Water levels are controlled by Canfors Lake in the upper drainage area of Rainy River. Minor scouring. Dredging was carried out behind the dam to provide water for the mill.

1980/81/82 Canfors water supply dam filled up with gravel twice this year. The gravel is then dredged out and hauled away. Some method of getting the gravel downstream should be devised.

1984 Commencing in the summer of '84 Canfor will be allowed to push gravel directly over the dam to allow for gravel recruitment.

Seasonal fluctuations in water levels.

Sketch of Rainy River, 1971
(lower spawning grounds)



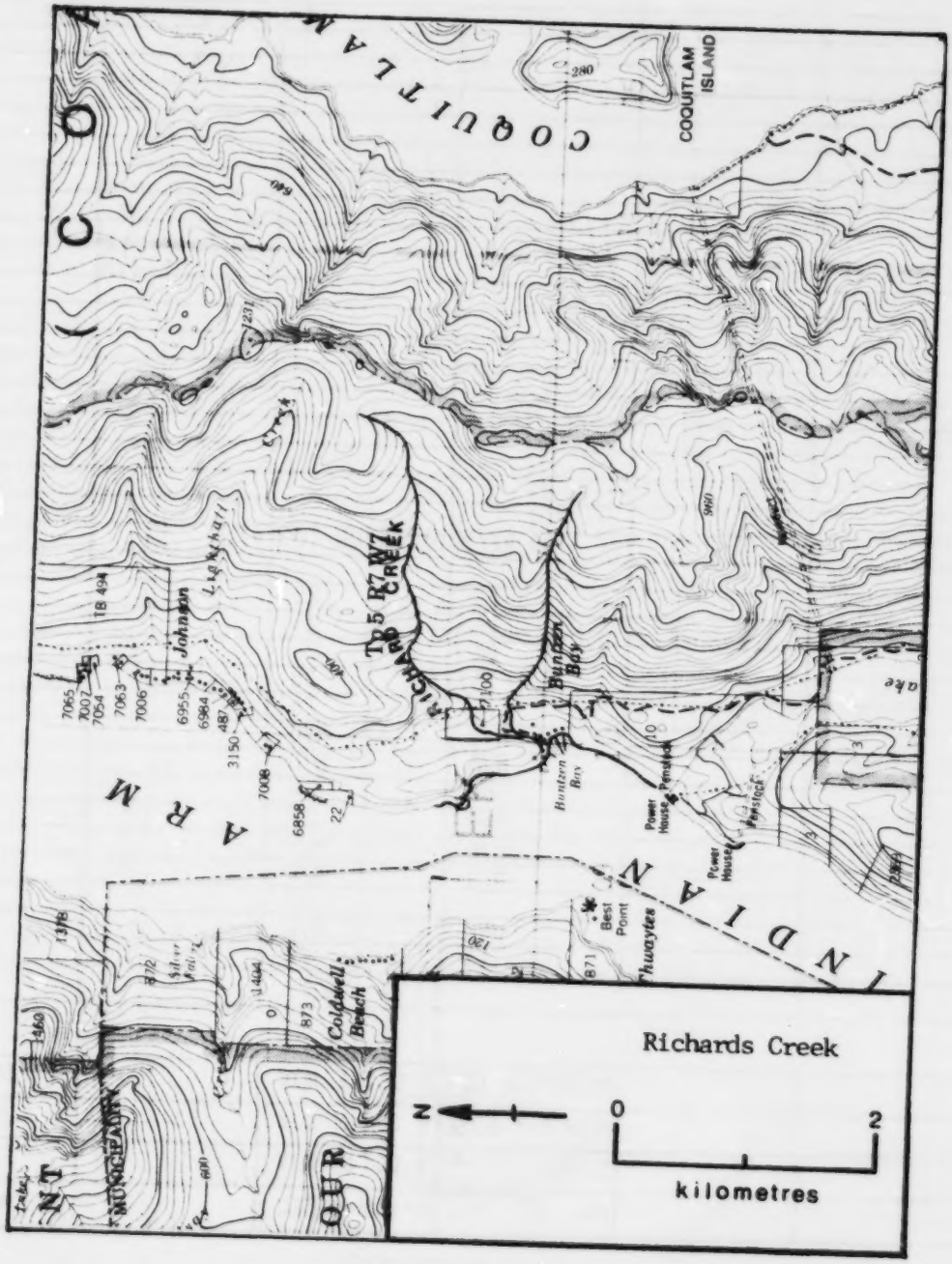
ESCAPEMENT RECORD FOR RAINY RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69			NO RECORDS PRIOR TO 1971			
70						
71			25	25		
72			25	25		25
73			25	25	25	25
74			75	25		25
75			75	25		25
76			N/O	N/O		
77			N/O	N/O		
78			60	4		
79			N/O	12		
80			N/O	N/O		
81			N/O	N/O		
82				12		
83			UNK	N/O		
84			13	70		
85						

TIMING

ARRIVE			M SEPT-L OCT	E OCT-E NOV		DEC
START			M OCT-M NOV	M OCT-M NOV		JAN
PEAK			L NOV	M OCT-M NOV		FEB
END			M-L DEC	M NOV-M DEC		APL

REMARK


COQUITLAM
ISLAND
Richards Creek
N
0
2
kilometres

NAME OF STREAM (Richards Creek) RAB NO. -

LOCAL NAME

DISTRICT 2 STATISTICAL AREA POSITION 49°23' 122°52'

LOCATION OF MOUTH Flows S.W. into Buntzen Bay, Indian Arm.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^oC)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Steep at .40km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
	unknown

GENERAL REMARKS

1981 First report. 10% erosion and silting — low water levels during summer, flood in late October.
1982 Low water June - Sept.
1984 Low water June to Oct.

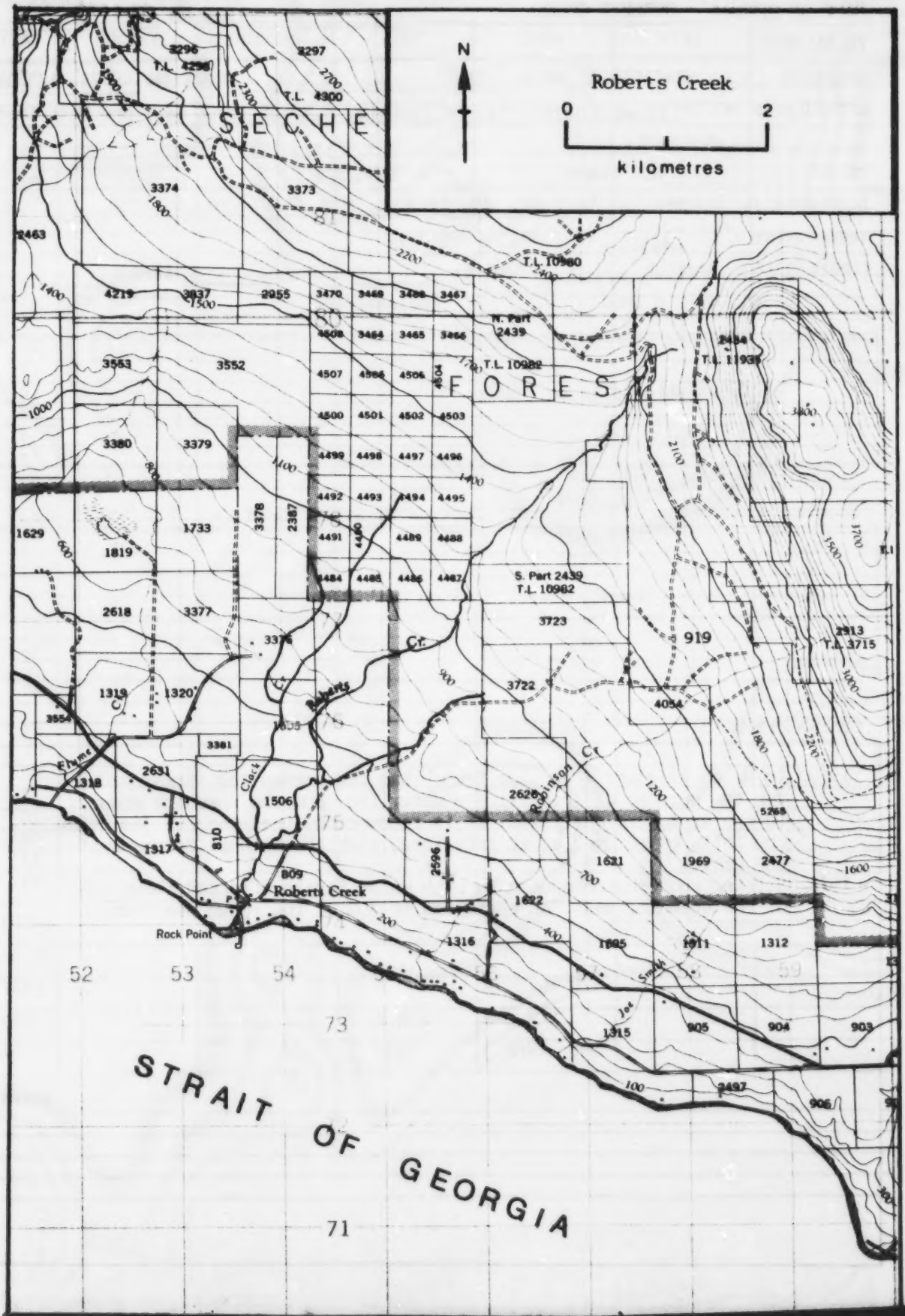
ESCAPEMENT RECORD FOR (Richards Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81			120		20	
82			27			
83			-			
84			30			
85						

TIMING

ARRIVE			E OCT			
START			-			
PEAK			OCT-L NOV			
END			L NOV-M DEC			

REMARK


N
Roberts Creek
0
2
kilometres
SECHE
FORES
T.L. 10980
T.L. 10982
T.L. 11939
T.L. 3715
T.L. 4296
T.L. 4300
N. Part 2439
S. Part 2439
T.L. 10982
919
Roberts Creek
Rock Point
STRAIT OF GEORGIA
52
53
54
73
71

NAME OF STREAM ROBERTS CREEK RAB NO. 90-1575

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 25′ 123° 38′

LOCATION OF MOUTH Flows S. into Str. of Georgia, S.E. of Trail Bay, New Westminster District.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 31.1 Jan. 29, 1965 MIN 0.024 Jul. 9, 1968

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable falls at 1.20km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- evenly distributed up to 1.20km

GENERAL REMARKS

1969 In March an eight foot wide trench was cut across the stream bed, for the purpose of installing a waterline, and the spawning grounds in the area were destroyed. It is recommended that the log jam below the falls be removed as it interferes with the natural movement of the gravel.

1972 Silting and erosion caused by high water levels affected about 20% of the spawning beds. An estimated 60-70% of the spawn was lost.

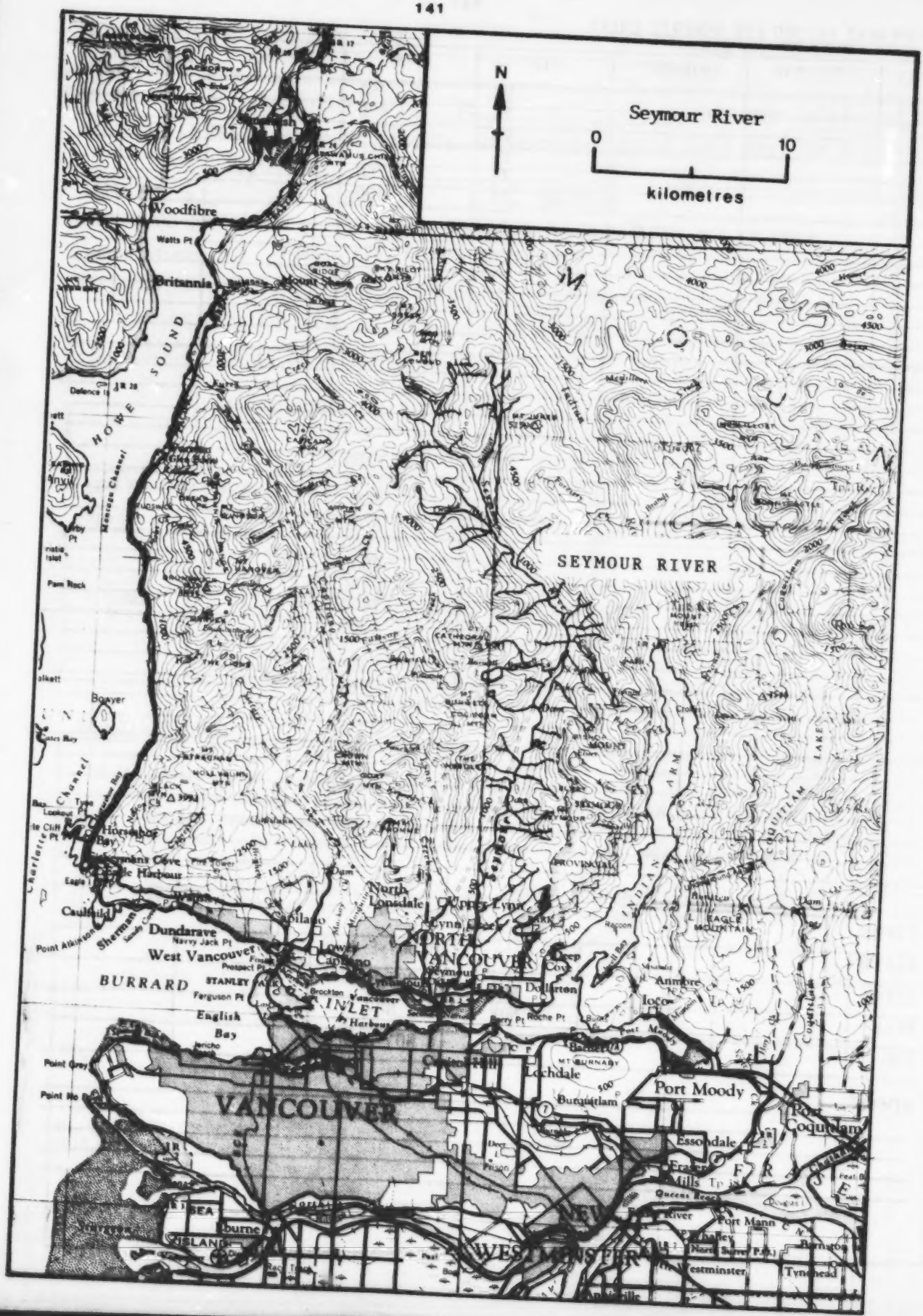
ESCAPEMENT RECORD FOR ROBERTS CREEK

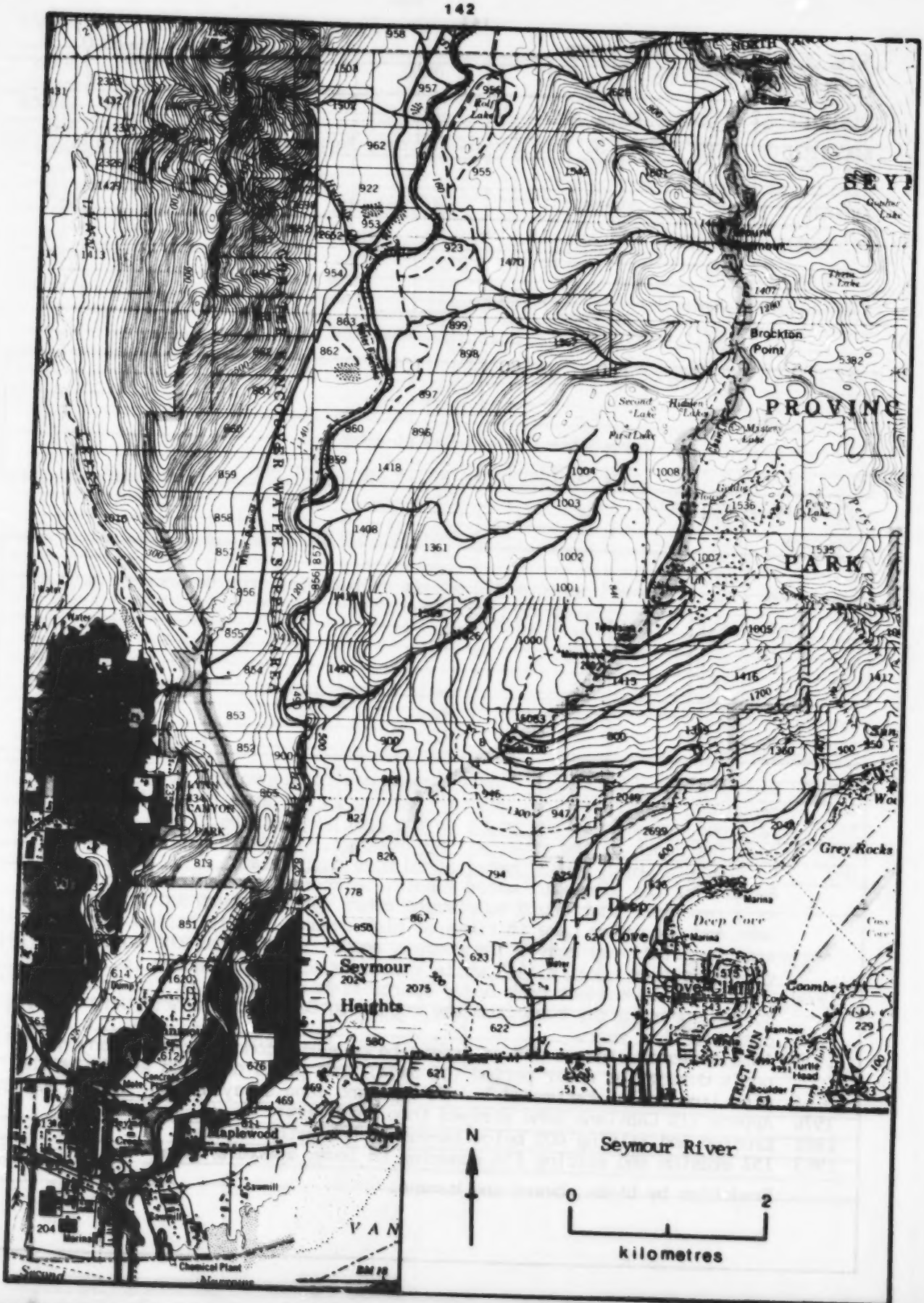
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	750		
48			25	400		
49			25	1500		
50			25	750		
51			75	750		
52			25	400		
53						
54						
55			NO RECORDS FROM 1953 - 1964			
56						
57						
58						
59						
60						
61						
62						
63						
64						
65				1200		
66				1000		
67				1500		
68				1200		
69				1500		
70				3000		
71				2100		
72				2500		
73				1300		
74				75		
75				400		
76				100		
77				1000		
78				250		
79				1500		
80				1200		
81			N/0	200		
82				115		
83				1500		
84				6500		
85						

TIMING

ARRIVE				M OCT-E NOV		
START			M OCT	M OCT-M NOV		
PEAK			M NOV	M-L NOV		
END			NOV	L NOV-L DEC		

REMARK


N
Seymour River
0
10
kilometres
SEYMOUR RIVER
HOWE SOUND
Woodfibre
Britannia
Watts Pt
Defence Is
Pam Rock
Bowyer
Horseshoe Bay
Caulfeild
Dundarave
West Vancouver
Point Atkinson
Sherman
BURRARD INLET
STANLEY
Ferguson Pt
English Bay
Point Grey
Point No
VANCOUVER
North Lonsdale
Lower Lynn
Upper Lynn
NORTH VANCOUVER
Deep Cove
Dollarton
Indian Arm
Anmore
Ioco
Barnet
Lochdale
Burquitlam
Port Moody
Port Coquitlam
Essondale
Fraser Mills
Queens Reach
Port Mann
Westminster
Tynehead
Burnaby
Capilano
Seymour
Eagle Mountain
Coquitlam Lake


Brockton Point
PROVINC
PARK
Grey Rocks
Deep Cove
Seymour Heights
Maplewood
Seymour River
N
0
2
kilometres

NAME OF STREAM SEYMOUR RIVER RAB NO. 90-8500

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°18' 123°01'

LOCATION OF MOUTH Flows S. into Second Narrows, Burrard Inlet, New Westminster Dist.

LENGTH 19 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 425 Jan. 15, 1961 MIN 0.314 Sept. 30, 1947

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable G.V.W.B.Dam at 19km

Large boulders and narrow canyon at 4km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- small numbers of coho in tributaries, the balance in main R. .
chum	- below G.V.W.B.gate
pink	- " "

GENERAL REMARKS

1969 Dredging and dyking with dragline machines to deepen the river to a depth of 8' at zero tide, was carried out in the area from below the railroad crossing to the mouth on the east side of the river. In the past the depth of the river was 8'. However, the depth decreased due to freshets which caused material to move downstream.
Because of its plentiful water supply, Seymour River is looked upon as a reservoir that could supplement other systems, such as Capilano Lake and Coquitlam Lake in times of high demand. Precipitation in this area is relatively heavy. The average annual rainfall at the southern end of Seymour Lake is 147" while Vancouver's annual average is 59".

1974 This river is subject to a heavy sports fishery because of its proximity to Vancouver. Stray coho from the return to Capilano Hatchery were observed this year.

1975 An additional closure was necessary to conserve coho stocks in canyon pools during low water period (15 days).Some pinks observed as far as the pipe line pools. Estimated 1 - 3% Capilano coho strayed into Seymour R.

1976 Approx 11% Capilano coho strayed into this river.

1981 Erosion and silting 60% below canyon to Dollarton Bridge.

1983 15% erosion and silting 15%, scouring in lower spawning area

Predation by birds, bears and humans.

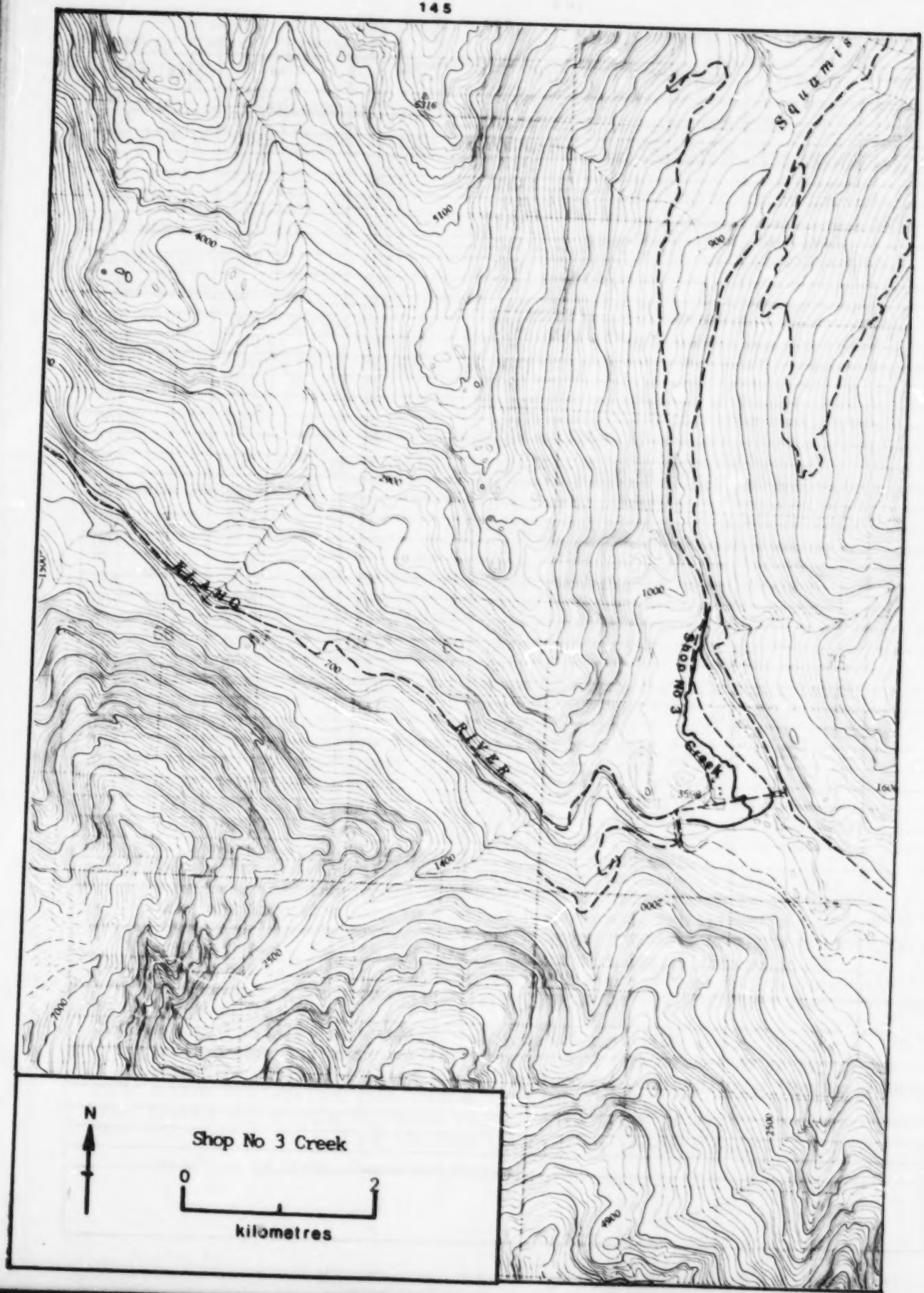
ESCAPEMENT RECORD FOR SEYMOUR RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			1500	750	1500	750
48			3500	1500	N/0	400
49			1500	1500	1500	750
50			1500	1500	N/0	750
51			1500	1500	750	750
52			3500	1500	25	750
53			1500	750	1500	750
54			1500	3500	25	750
55			3500	200	400	750
56			1500	200		400
57			3500	200	75	750
58			400	200	N/0	200
59			UNK	UNK	UNK	UNK
60			1500	25		750
61			400	25	400	750
62			1500	25		400
63			1500	75	400	400
64			750	25		750
65			400	25	200	200
66			1500	25		400
67			400	25	400	200
68			1500	25	N/0	400
69			1500	N/0	25	400
70			1500		N/0	200
71			3500	25	200	200
72			1500	750	N/0	200
73			1500	25	25	200
74			3500	N/0	N/0	200
75			1500	25	200	200
76		6	1000	N/0	100	75
77		20	3000	150	100	250
78		17	5000	220	-	350
79		150	4500	300	250	300
80		250	9000	250	-	300
81		50	8500	800	1000	600
82		250	8500	200	-	550
83		300	14000	500	1000	550
84		280	13000	600	-	580
85						

TIMING

ARRIVE			JUN - JUL			DEC
START		SEPT	JUN - JUL	OCT	JUL - AUG	TO
PEAK		OCT	M AUG-L SEPT	OCT	AUG - OCT	
END		NOV	SEPT - DEC	NOV	M SEPT-OCT	JUN

REMARK


Squamish
RIVER
Shop No 3 Creek
N
Shop No 3 Creek
0
2
kilometres

NAME OF STREAM (Shop #3 Creek) RAB NO. -

LOCAL NAME

DISTRICT _____ STATISTICAL AREA _____ POSITION 50°07' 123°24'

LOCATION OF MOUTH Flows into Elaho River near confluence of Elaho River and Squamish River

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable rock falls at 3.2km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- evenly distributed between forestry logging road and 3.2km upstream.

GENERAL REMARKS

1979 First report — formerly included with Squamish River escapements.
1980 10% erosion and silting — minor scouring. High water levels during flood, but no evidence of damage.
1982 Some bed load movement may have taken place during late Oct. flood.

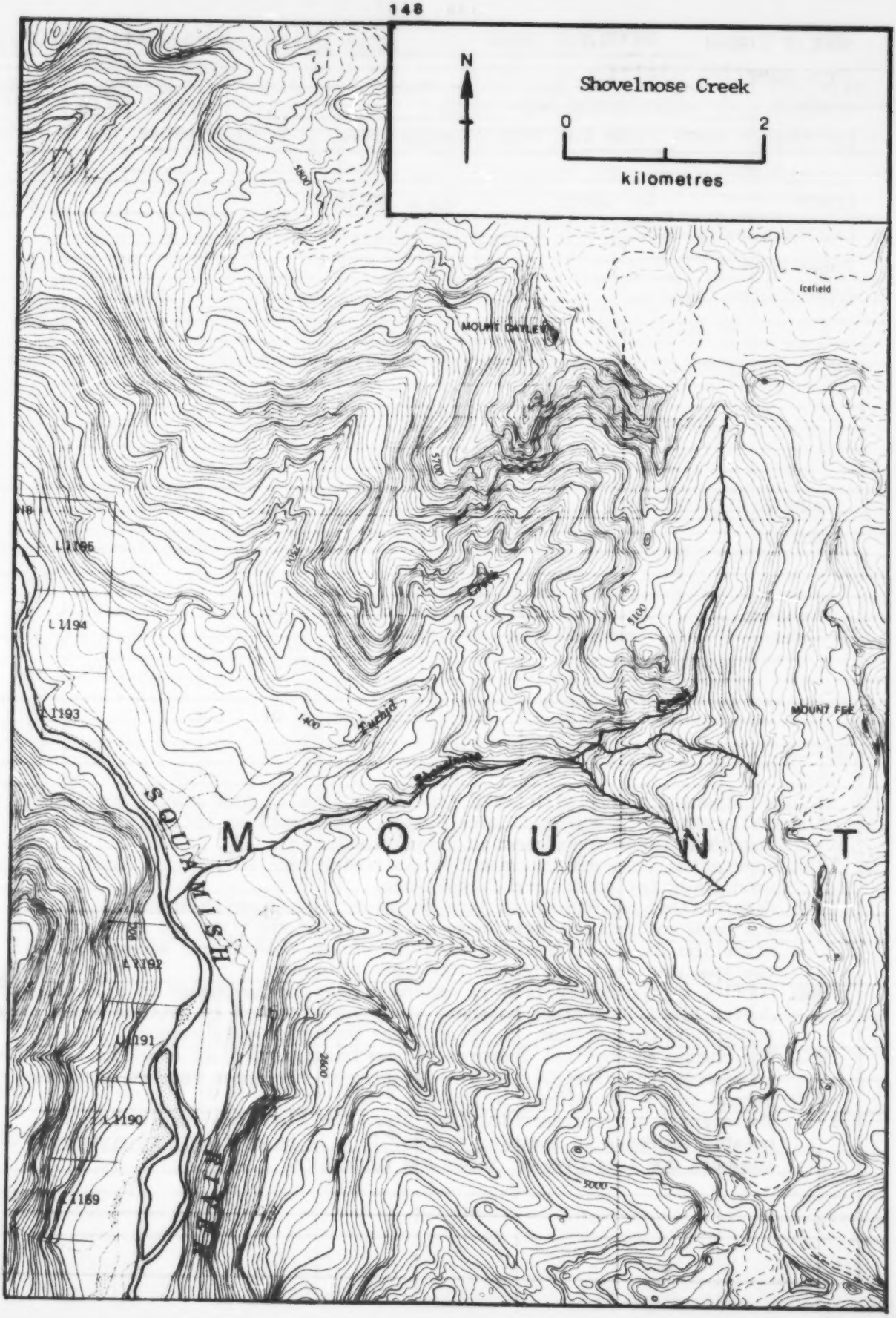
ESCAPEMENT RECORD FOR (Shop 3 Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			25			
80			100			
81			30			
82			200			
83			75			
84			100			
85						

TIMING

ARRIVE			OCT			
START			NOV			
PEAK			L NOV-DEC			
END			L DEC-JAN			

REMARK


N
Shovelnose Creek
0
2
kilometres
Icefield
MOUNT CAYLEY
MOUNT FEE
L 1195
L 1194
L 1193
L 1192
L 1191
L 1190
L 1189
SQUAMISH
RIVER
M O U N T

NAME OF STREAM SHOVELNOSE CREEK RAB NO. 90-1300-180

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 50° 04' 123° 21'

LOCATION OF MOUTH Flows S.W. into Squamish River, S. of Elaho River, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable falls at 4.8m

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho chinook chum	- throughout on available gravel - concentrated in lower .40km - primarily in lower reaches.

GENERAL REMARKS

1973
An ideal spawning ground with consistent water levels, good gravel and plenty of shaded areas. This stream is groundwater fed — back up water is forced into Shovelnose Creek when Squamish River floods.

1978 Vegetation along this stream bank is coming back well and affords good cover for adults and fingerlings.

1980 Severe flood conditions in late December. The Squamish River cut through its bank and entered Shovelnose at just about the upstream limit of fish migration. The river then utilized the stream channel and scoured out all the spawning area. Estimated 100% loss of spawn.

1982 Outflow of the Squamish River extended 137m due to change in side channel during flood. Tenderfoot hatchery staff concentrated on getting brood stock from this stream. Eagle and bear predation very evident.

1983 The change in physical features of the lower portion of creek has resulted in fish having difficulties in migrating to the upper reaches of stream. Stream course lengthened by 2.4km.

1984 The significant increase in flows since the flood has resulted in a notable decrease in spawning stocks. It will be difficult to enumerate spawners due to increased flows and turbidity.

ESCAPEMENT RECORD FOR SHOVELNOSE CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25			
48			400			
49			75			
50			25			
51			400			
52			3500			
53			75			
54			200			
55			200			
56			75			
57			75		75	
58			200			
59			75		25	
60			75			
61			200			
62			200			
63			75			
64			400			
65			400			
66			75			
67			200			
68			200			
69			50			
70			200			
71		35	200	75	400	25
72		N/0	250	700		350
73		200	1200	2500	2500	100
74		200	3500	1500		75
75		75	400	400	75	25
76		200	400	3500	-	200
77		25	200	1500	25	N/0
78	5	80	175	75	-	70
79		25	75	75	25	25
80		125	750	1500		80
81		150	600	1200	400	40
82		150	350	400		50
83	10	100	50	50	N/0	40
84		150	N/0	N/0		
85						

TIMING

ARRIVE		M JUN-E AUG	SEPT-E NOV	L SEPT-E NOV	E JUL	FEB
START		E JUL-L AUG	SEPT-L NOV	M OCT-E NOV	E AUG	TO
PEAK		M AUG-E SEPT	OCT-M DEC	M NOV	M SEPT	
END		L SEPT-M OCT	OCT-E JAN	L NOV-DEC	M OCT	JUN

REMARK

Spring Creek

see
Branch 100 Creek p.9

NAME OF STREAM (Spring Creek) RAB NO. -

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°56' 123°19'

LOCATION OF MOUTH Flows into Squamish River, near 48 km point on W. side of river.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (^oC)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable falls at 2.4km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chinook	-distributed evenly throughout first 1.6km
coho	- " " "
chum	- " " "

GENERAL REMARKS

1982
First report. This creek was previously included with Squamish River escapement. It is very productive for the accessible length, but as it is situated near the 48km point on the west side of the Squamish,it is very difficult to visit on a regular basis.Water levels are greatly influenced by extended periods of precipitation. Bird and bear predation evident. Some egg digging by chum.
1983 Frequent high water over fall and early winter months. Some egg digging, but not extensive.Escapement figures based on observation by hatchery staff and during a November 21 helicopter flight.

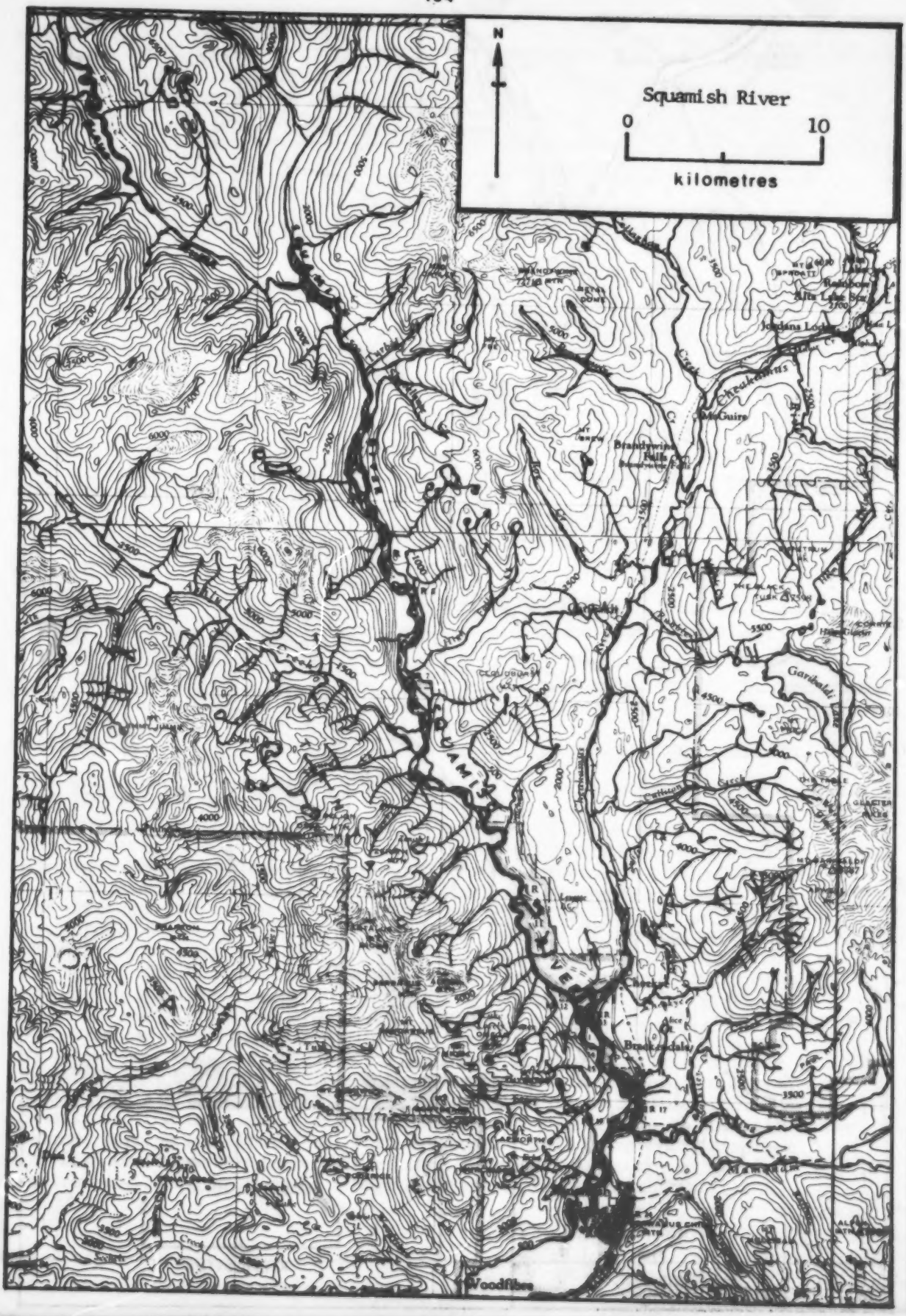
ESCAPEMENT RECORD FOR (Spring Creek)

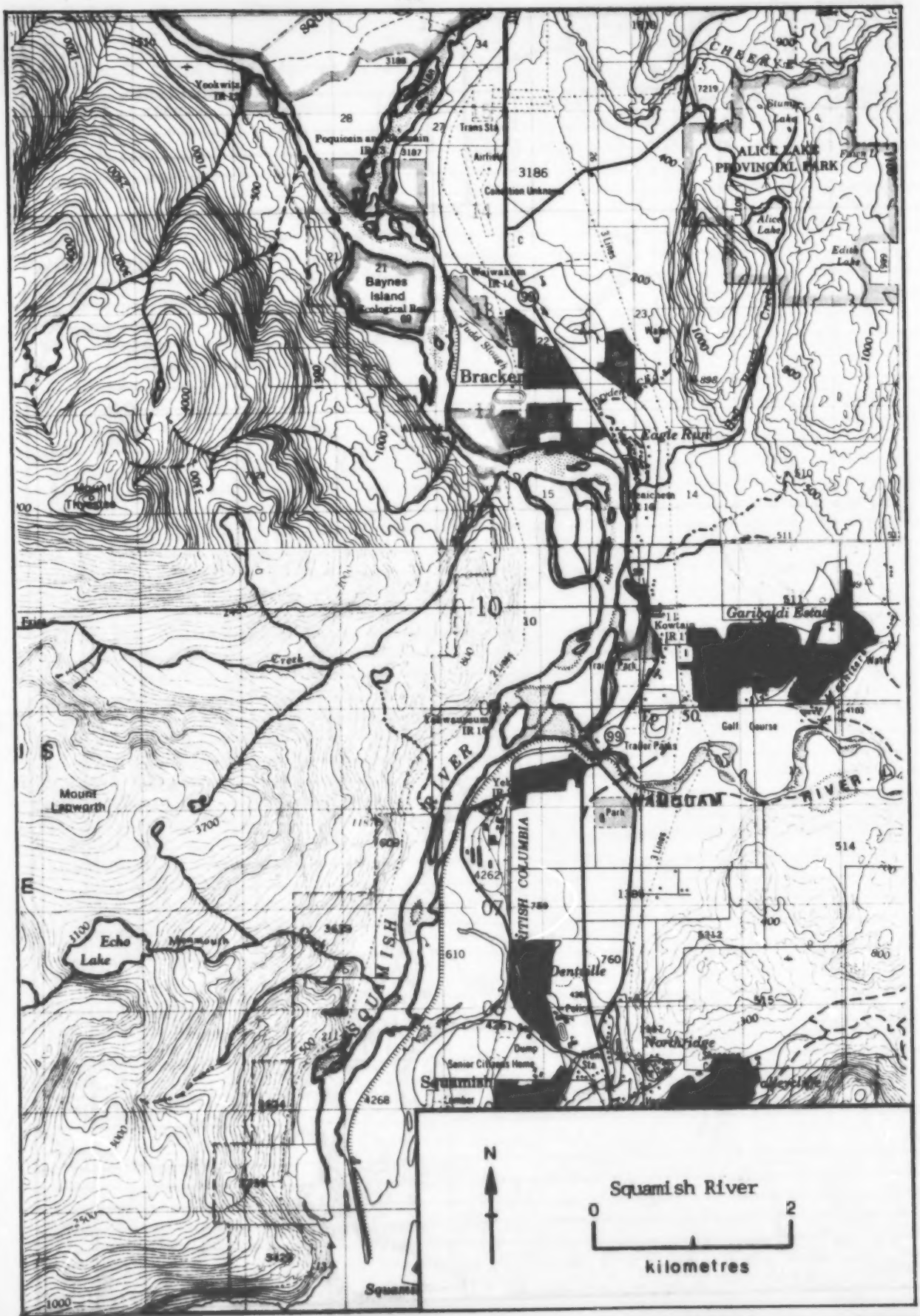
YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82		200	350	4500		
83	10	75	200	4000	15	50
84		100	200	1000		
85						

TIMING

ARRIVE	E SEPT	E AUG	L SEPT-L NOV	L SEPT-E NOV	L AUG	APL
START	M SEPT	M AUG-E DEC	M NOV-E DEC	E OCT-L NOV	E SEPT	APL
PEAK	L SEPT	E-L SEPT	L NOV-L DEC	E NOV-M DEC	M SEPT	MAY
END	E OCT	E-L OCT	L DEC-M JAN	L NOV-L DEC	E OCT	JUN

REMARK


N
Squamish River
0
10
kilometres
Garibaldi
Brandywine Falls
McGuire
Woodfibre


Baynes Island Ecological Reserve 69
Bracken
Eagle Run
Garibaldi Estates
ALICE LAKE PROVINCIAL PARK
Alice Lake
Edith Lake
Stump Lake
Mount Thurston
Mount Lagwarth
Echo Lake
Mamquam
Dentville
Northridge
Squamish
Golf Course
Trailer Park
Dump
Senior Citizens Home
Kowtain IR 1
Yekwaupsum IR 1
Poquioson and Chain IR 3
Yookwitz IR 2
Mamquam IR 14
Trans Sta
Airfield
Collection Unknown
Park
Cheekeye
SQUAMISH RIVER
MAMQUAM RIVER
BRITISH COLUMBIA
N
Squamish River
0
2
kilometres

NAME OF STREAM SQUAMISH RIVER RAB NO. 90-1300

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°41′ 123°10′

LOCATION OF MOUTH Flows S. into head of Howe Sound, New Westminster Dist.

LENGTH 69 km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX 2230 Sept.6, 1957 MIN 21.2 Jan. 12, 1979

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable falls at 69km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chinook	- majority of chinook spawned above Ashlu Cr.
chum	- 65% chum below Cheakamus R. 35% above Ashlu confluence.
coho	- " " " "

(comments from 1982/83 reports)

GENERAL REMARKS

Accessible tributaries: Elaho R. Ashlu Cr.; Cheakamus R.; Shovelnose Cr.; Meighan Cr.; and Mamquam R.
Precipitation on the Squamish River watershed ranges from 60" to over 150". Short duration floods occur as a result of heavy rains enhanced by rapid snow melt. Heavy siltation occurs during these freshets. In 1963, Canadian Collieries extended the logging road to the mouth of the Elaho River. Thus, the upper reaches of the Squamish River are now accessible to the public. Due to past development, a large part of the estuary in the area of Mamquam channel has been altered or eliminated by dredge and land fill operations and log storage. An additional port oriented land fill river training dyke and dredge spoil have recently eliminated nearly 100 acres of inter-tidal marsh and mud flat in the central portion of the estuary. B.C.Railway has also proposed expansion of existing port facilities to include a bulk and unit load port development which will occupy a major portion of the inner estuarine environment. In addition to direct habitat loss, this industrial development also causes environmental degredation. The remaining inner area constitutes the only source of inner estuarine food available to juvenile salmon, herring and other fish. Port development will permanently displace the fish which use the inner estuary into an exclusively outer estuarine environment. This could cause a huge decrease in fish populations.

continued.....

SQUAMISH RIVER

1963 The logging practiced on this watershed will have an adverse affect on run-off for the next 20 years.
Remedial work was carried out on Judd Slough in Sept. and Nov. 1969 to help alleviate problems related to the extremely low water levels caused by lack of precipitation. The rock dyke at the head of Judd Slough was extended and the two thirty-six inch culverts were replaced with one sixty inch culvert. Access to the main channel of the Squamish River and fresh water exchange between the main channel and inner delta is now possible.

1974 This stream supports a very heavy sports fishery and a large Indian food fishery. The course of the stream changes every year.

1975 The late October floods caused extensive damage to the egg depositions of the pink and chinook salmon — possible loss as high as 80% of deposited eggs.

1978 Subject to a heavy sports fishery all year round and to a heavy Indian food fishery that probably accounts for 50% take of returning coho and chinook.

1980 Severe flood conditions existed at the end of December. Extensive damage was done to spawn in the entire Squamish system. Upper Squamish - estimate 30% chum survival. Coho and chinook will be lost. Mid Squamish - 30% of coho and chinook should survive. Lower Squamish, most chum lost except for Judd Slough.

1982 Flood conditions late October may have caused mortality to chinook. Some egg digging by chum.

1983 Sockeye appear to utilize confluence areas of west side streams which flow into Squamish River. Minimal egg digging by chum.

1984 Specific escapements: Eagle Run Slough 7,000 chum, Baynes Isl. 8000 chum, Three falls 3,000 chum.

Physical characteristics:

1975 Serious erosion and silting — 30-50% of bed affected, heavy scouring throughout.

1978 Some stream-bed course changes between 24 and 29 miles.

1980 Mainstem affected by gravel movement. Much scouring occurred along the whole length of the river. Debris scattered everywhere. Extremely high water levels on December 26, 27, and 28.

1981 Approx 20% of the run was lost due to flooding Oct. and Nov 1 -- estimate about 15% of stream bed adversely affected. Some scouring and change of stream beds, damage moderate.

1982 Much scouring due to late Oct. flood conditions, 20% of stream beds may have been directly affected. Extensive scouring and siltation due to movement of tree debris downstream.

1983 Major erosion problem noted at clay banks just downstream from Cheakamus River confluence. Many changes in stream flow characteristic of Upper Squamish. Periodically high flows over fall and early winter months -- normal flow patterns over rest of year.

1984 Water levels abnormally high during Thanksgiving weekend.

Predation: eagles, seagulls, bears, wolves and coyotes.

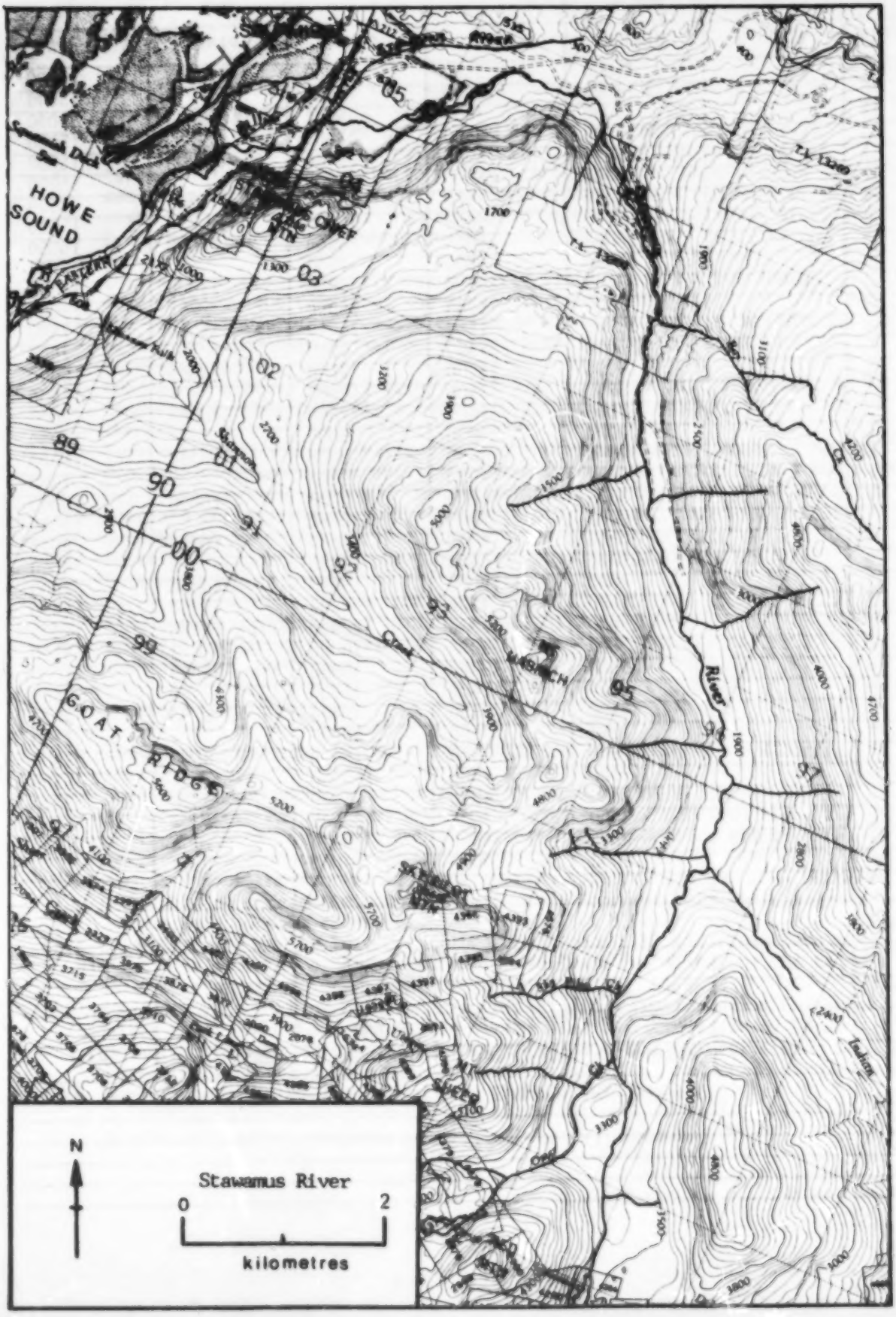
ESCAPEMENT RECORD FOR SQUAMISH RIVER

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947		15000	3500	35000	350000	15000
48		15000	75000	75000	N/0	15000
49		15000	7500	35000	250000	35000
50		15000	3500	35000		15000
51		15000	75000	35000	200000	15000
52		15000	75000	175000		35000
53		15000	3500	15000	175000	7500
54		15000	35000	15000		15000
55		15000	15000	15000	100000	15000
56		15000	1500	7500		7500
57		15000	35000	35000	75000	15000
58		15000	15000	35000		15000
59		15000	1500	75000	75000	7500
60		15000	7500	7500		7500
61		15000	35000	7500	15000	15000
62		15000	3500	15000		15000
63		7000	7000	7000	70000	7000
64		7000	30000	15000		15000
65		30000	7000	3000	30000	15000
66		15000	7000	3000		7000
67		5000	10000	20000	15000	10000
68		10000	7000	70000		10000
69		20000	8000	18000	10000	8000
70		25000	15000	50000	N/0	6000
71		8000	18000	15000	15000	2500
72		8000	4500	200000	750	18000
73		12000	18000	120000	70000	12000
74		7500	75000	70000	N/0	15000
75		3500	35000	35000	35000	15000
76		3500	3500	75000	-	7500
77		3500	7500	35000	1500	3500
78	100	1000	7000	20000	-	1200
79		1500	7500	15000	3500	3500
80		2000	4000	150000	-	5500
81		3200	4500	75000	9000	3200
82		3000	7500	100000	-	1000
83	300	2500	5000	50000	1000	500
84	N/0	2000	10000	50000	UNK	
85						

TIMING

ARRIVE		JUN-E JUL	M AUG-E OCT	SEPT-OCT	E AUG	MAR
START	-	JUN-E JUL	SEPT-E NOV	E OCT-NOV	L AUG	TO
PEAK	-	JUL-L SEPT	SEPT-M DEC	M NOV-E DEC	SEPT	
END	-	JUL-M OCT	OCT-L JAN	DEC-M JAN	OCT	MAY

REMARK


HOWE SOUND
GOAT RIDGE
Stawamus River
0
2
kilometres
N

NAME OF STREAM STAWAMUS RIVER RAB NO. 90-1200

LOCAL NAME (Little Stawamus River)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°41′ 123°09′

LOCATION OF MOUTH Flows N.W. and S.W. into head of Howe Sound, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX 61.4 Oct. 25, 1979 MIN 0.170 Feb. 12, 1975

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Increased gradients creating rock falls
Impassable rock falls at 3.2km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- majority of fish located in upper section of Little Stawamas.
chum	- evenly scattered

GENERAL REMARKS

In the first .80km downstream of the obstruction, the stream has a fairly steep gradient and many large boulders. Although the lower 2.4km has a tendency to meander, the stream bed has finer gravel and is better suited to spawning.
This non-glacial stream has clear water and maintains a fairly constant flow throughout the year.
Fish molestation and interference are a problem as 700-800 people live along the water course (1974)
The watershed was previously logged off, but the second growth is now well established. (1973)
This 3.2km spawning area is capable of supporting a large number of chum spawners. Some artificial means or re-establishing chum production on the stream should be given serious consideration.(1973)
Nearly all the coho in this system are in the Little Stawamus River.(1973)
The Little Stawamus main tributary is 4km long, and is groundwater swamp fed. Coho escapement ranges from 150-1500 per year. (1973)
Bulldozer work and land clearing affected approx. 640m of the stream bed of the Little Stawamus River. Trees and brush from both banks, in the upstream end of the housing development project, have been removed. Consequently, the banks have eroded in several places and silt has been deposited into the stream. There were pools in these affected areas before the land was cleared. The stream now has a man-made channelled

continued

STAWAMUS RIVER

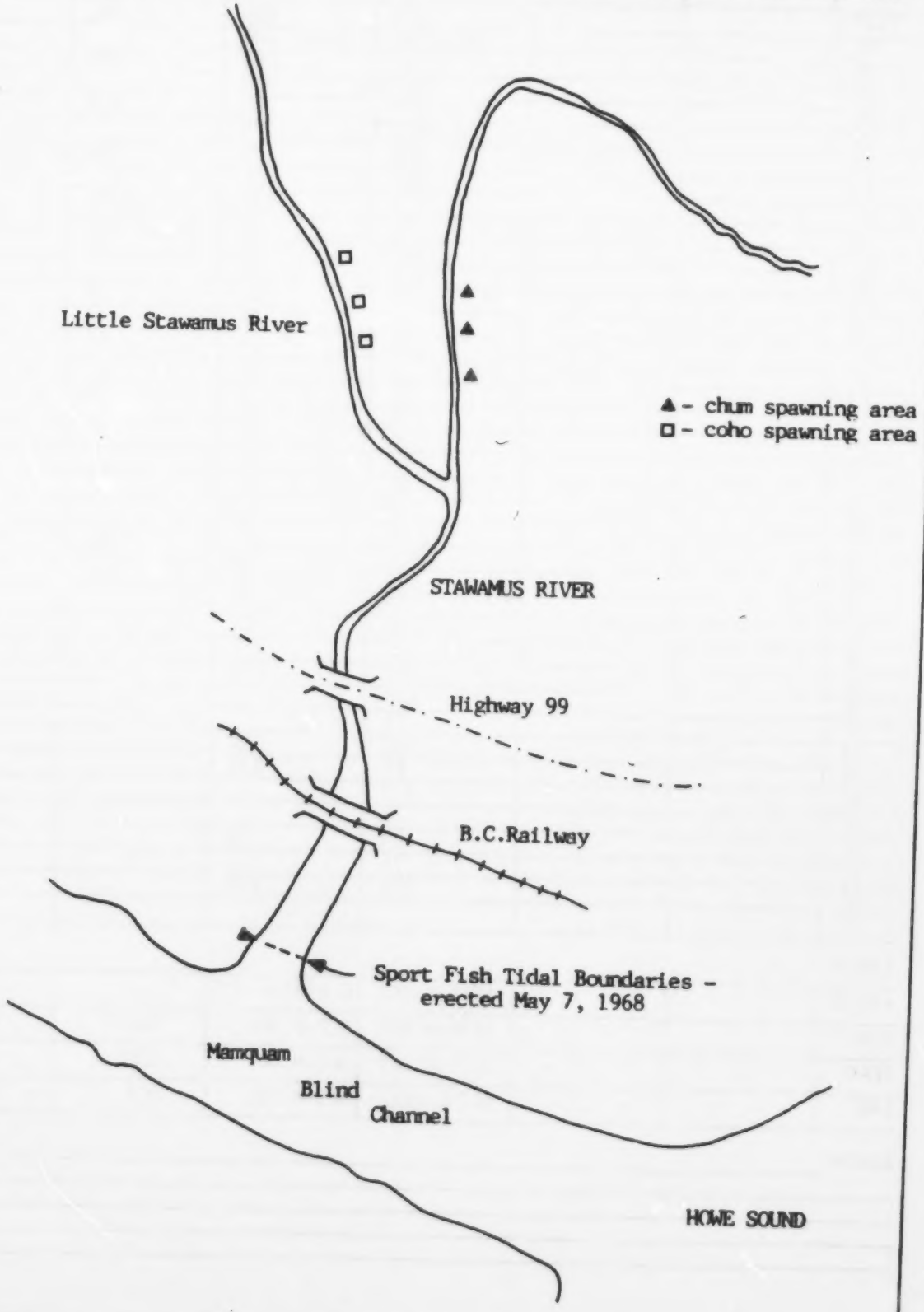
appearance. The stream above and below the cleared area appears to provide an excellent habitat for rearing juvenile coho. There is an abundance of low brush and trees on the margins, and small pools are distributed throughout the stream. Fry were seen below the cleared section and near the stream source. None were seen in the cleared section.

1977 About 3.2km of Little Stawamus River is used for spawning, but occasionally fish use the marsh when a big run is in the stream.
1978 Fish numbers were fairly evenly split between Little Stawamus main tributary and the main Stawamus.
1980 Survival should be in the 70-80% range.
1981 Spawning occured after Oct. 31 flood, so there was no damage done.
1982 A small bank stabilization program took place behind the residences of Valleycliff along the Little Stawamus Creek.
1983 Stawamus River supports very little spawning and is primarily a transition zone for stocks migrating to Little Stawamus Creek. This creek is subject to damage due to its relationship with the maintainance and development of the Valleycliff subdivision.

Physical characteristics:
1980 Severe erosion and silting in main Stawamus — some in Little Stawamus. Severe scouring in main Stawamus.
1981 Gravel movement during flood.
1982 Some erosion to lower sections of Stawamus River. Movement of bedload very evident during late October flood.

Predation: Light bird predation, fish very vulnerable to dogs and human molestation.

Sketch of Stawamus River, 1968



ESCAPEMENT RECORD FOR STAWAMUS RIVER (Little Stawmus River)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			400	400	750	200
48			750	400		200
49			750	750	750	200
50			400	400		200
51			750	200	400	25
52			750	75		75
53			200	75	200	75
54			400	200		25
55			400	200	25	75
56			75	25		25
57			400	75	25	25
58			400	75		75
59			75	200	25	25
60			75	75		25
61			25	25	25	25
62			25	25		25
63			75	75	75	25
64			200	25		25
65			75	25	25	25
66			25	25		25
67			50	50	N/0	50
68			50	50		50
69			50	50	N/0	50
70			900	N/0	N/0	25
71			200	N/0	N/0	N/0
72			40	N/0		
73			450	25		25
74			750	N/0		
75			400	N/0		
76			400			25
77			25			25
78			150	UNK		25
79			25	N/0		25
80			N/0			25
81			75			25
82			100	25		20
83			75			
84			200	200		
85						

TIMING

ARRIVE			SEPT-L OCT	L SEPT-M OCT		
START			SEPT-M NOV	OCT-E NOV	SEPT	MAR
PEAK			SEPT-E DEC	OCT-M NOV	SEPT	APL
END			OCT-L DEC	NOV-M DEC	OCT	MAY

REMARK

Tenderfoot Creek

see

Cheakamus Riverp.30

NAME OF STREAM (Tenderfoot Creek) RAB NO. 90-1300-050-013

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 50′ 123° 09′

LOCATION OF MOUTH Flows S. into Cheakamus River

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Passable to lake, 1.6km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- on all available gravel and in the lake
chum	- " " "

GENERAL REMARKS

1981 The Salmon Enhancement Program built a hatchery by the lake this year.

1982 This stream is ground water fed from Tenderfoot Lake which eliminates potential for high water changes. Stream is primarily a transitional zone with most spawning taking place in the lake.
This system is now greatly influenced by operations at Tenderfoot Hatchery. Coho brood stock is removed from a broom stick fence permanently installed between the Cheakamus confluence and the lake. 1500 cu.yd. of poor gravel was replaced in the lake with 1500 cu. yds. of clean washed gravel.

1983 Some bird predation — a limited amount of egg digging. Coho escapements to system were very late but extremely high when they finally showed up. Access to stream through culvert under B.C.Rail tracks may have hindered adequate chum escapements.

1984 Counting fence at the mouth of stream manned by SEP personnel.

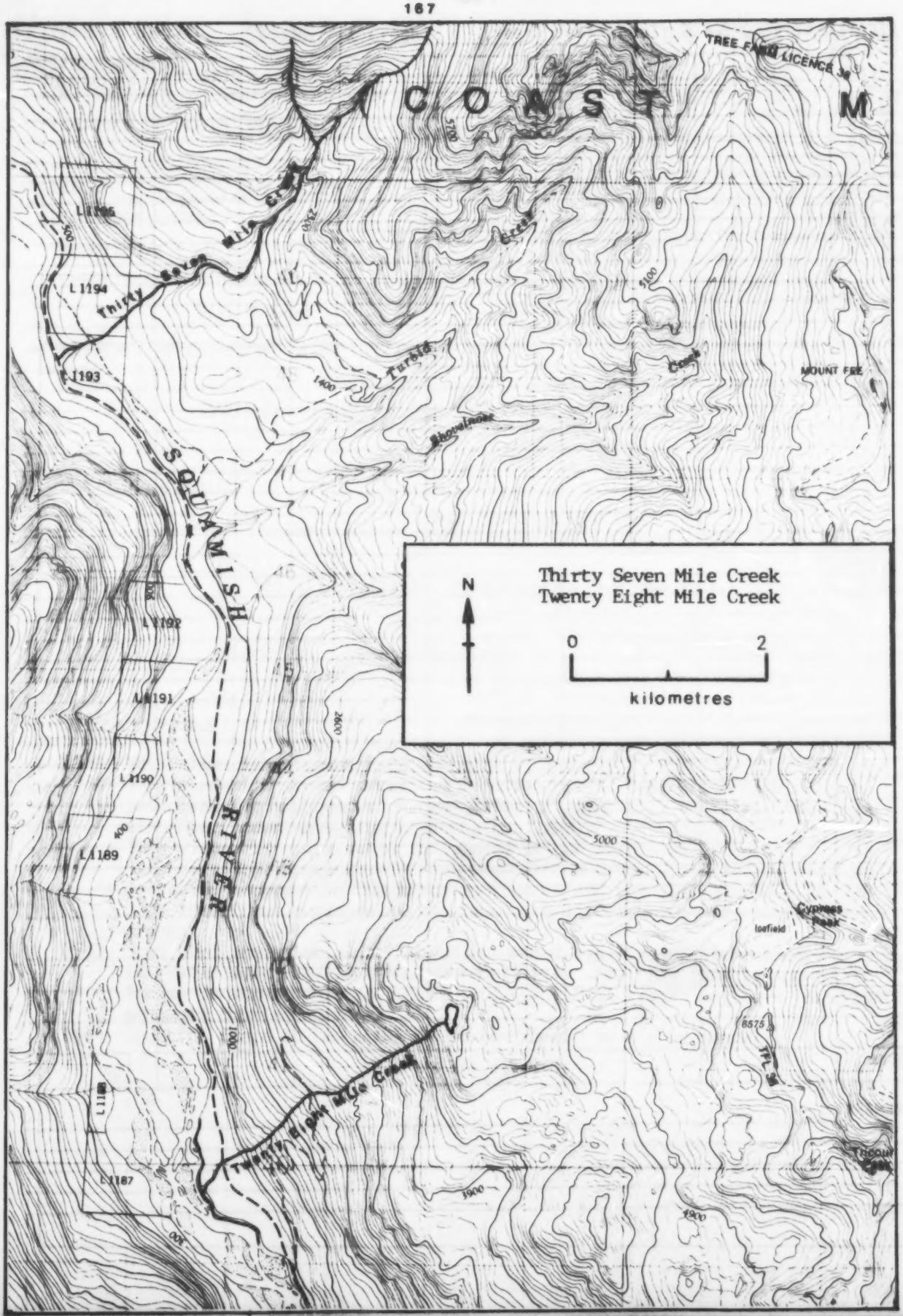
ESCAPEMENT RECORD FOR (Tenderfoot Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81		N/O	500	2000		
82			250	800		
83			3500	100		
84			700	10000		
85						

TIMING

ARRIVE			L SEPT-M NOV	L SEPT-E OCT		
START			L OCT-E DEC	E-L OCT		
PEAK			L NOV-E JAN	M NOV		
END			M FEB-L DEC	M DEC		

REMARK


TREE FARM LICENCE
COAST
MOUNT FEE
Thirty Seven Mile Creek
Twenty Eight Mile Creek
SQUAMISH RIVER
L 1196
L 1194
L 1193
L 1192
L 1191
L 1190
L 1189
L 1188
L 1187
N
0
2
kilometres

NAME OF STREAM (Thirty Seven Mile Creek) RAB NO. _____

LOCAL NAME _____

DISTRICT 2 STATISTICAL AREA 28 POSITION 50°04′ 123°21′

LOCATION OF MOUTH Flows into Squamish River, N. of Turbid Creek

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable rock falls at 2.4km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	-evenly distributed throughout accessible reach
chum	- " " " "

GENERAL REMARKS

1979 First report, formerly included with Squamish River escapements.
1980 High water in Dec. but little damage.
1982 Some bed load movement may have taken place during late Oct. when water level was high. Light bird and bear predation.
1983 Frequent high water over fall and early winter months, but flushes and resumes normal flows quickly. Good graveland stable stream characteristics.

ESCAPEMENT RECORD FOR (Thirty Seven Mile Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			25	25		
80			300	N/D		
81			-	-		
82			175			
83			200	-		
84						
85						

TIMING

ARRIVE			OCT	OCT		
START			NOV	NOV		
PEAK			NOV	DEC		
END			L DEC	DEC		

REMARK Formerly included with Squamish River.

Twenty-Eight Mile Creek

see

Thirty-Seven Mile Creek p.167

NAME OF STREAM (Twenty Eight Mile Creek) RAB NO.

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 50°02′ 123°15′

LOCATION OF MOUTH Flows into Squamish River, SW of Cypress Peak

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable rock falls at 3.2km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
coho	- evenly distributed
chum	- " "

GENERAL REMARKS

1979 First report, formerly included with Squamish River escapements. Light predation.

1980 Some silting from flood, little scouring, high water during flood, and the Squamish River deposited silt in this creek when it overflowed.

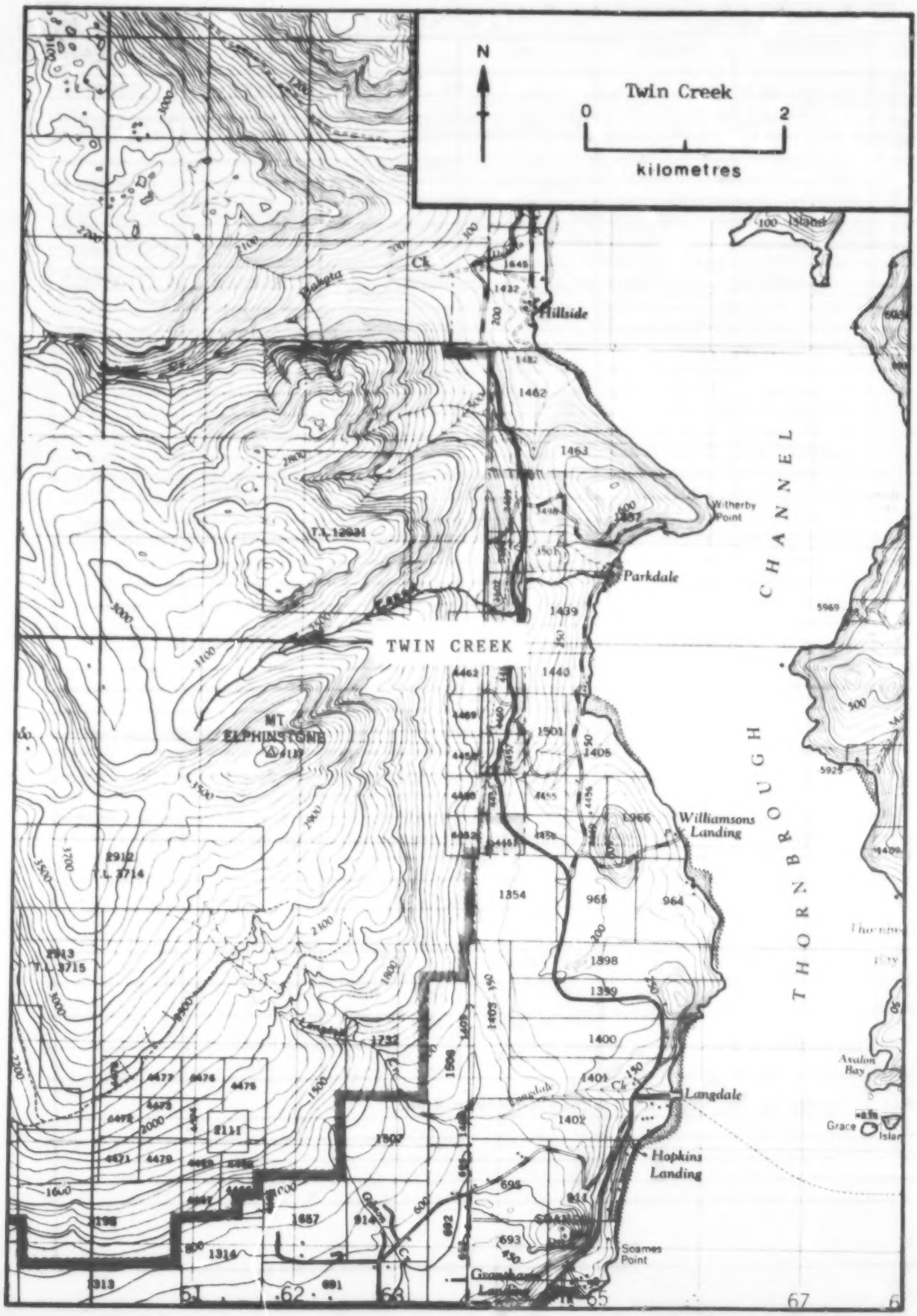
ESCAPEMENT RECORD FOR (Twenty Eight Mile Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79			25	25		
80			25	N/O		
81			25	N/O		
82						
83						
84						
85						

TIMING

ARRIVE			SEPT-NOV	OCT		
START			SEPT-E DEC	OCT - NOV		
PEAK			OCT-M JAN	NOV - DEC		
END			DEC-L JAN	DEC		

REMARK Formerly included with Squamish River Runs.


N
Twin Creek
0
2
kilometres
Hillside
Parkdale
Witherby Point
TWIN CREEK
MT ELPHINSTONE
Williamsons Landing
Langdale
Hopkins Landing
Soames Point
Gambier Island
Grace Islet
Avalon Bay
THORNBOROUGH CHANNEL
T.L. 12931
T.L. 3714
T.L. 3715
62
63
65
67

NAME OF STREAM (Twin Creek, Archie's Creek) RAB NO. 90-1475

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 29′ 123° 29′

LOCATION OF MOUTH Flows N.W. into Thornbrough Channel, S. of Port Mellon, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Boulders and steep gradient at approx .40km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- in lower river

GENERAL REMARKS

The salmon spawners reported in 1972 were the first observed since the early sixties.

1972 An estimated 50% of the spawn was lost.
1976 Stream subject to the hazards of population and development. Highways Dept. is depositing deleterious substances in creek.
1977 L and K Lumber developing this property and #1 stream to be diverted.
1978 Fish molestation by unknown persons.
1979 Stream was not properly enumerated this year. It is expected that more chum entered the system in Nov. as well as coho. High Dec. flooding.

ESCAPEMENT RECORD FOR (Twin Creek) (Archies Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69		NO RECORDS PRIOR TO 1970				
70				N/0		
71				N/0		
72				200		
73				150		
74				25		
75				N/0		
76				100		
77				400		
78				120		
79				24		
80			N/0	N/0		
81			N/0	N/0		
82			N/0	N/0		
83			N/I	N/I		
84						
85						

TIMING

ARRIVE				M OCT		
START				M OCT-E NOV		
PEAK				L NOV		
END				M DEC		

REMARK

Upper Paradise Channel

see

Cheakamus River p.30

NAME OF STREAM (Upper Paradise Channel) RAB NO. 90-1300-050-012

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°49´ 123°08´

LOCATION OF MOUTH Flows into Cheakamus River

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	-throughout channel
coho	-throughout channel

GENERAL REMARKS

Upper Paradise Channel was developed in 1982 in a former flood channel of the Cheakamus River now isolated from the mainstem at its upstream end by a dyke.The groundwater fed channel was designed primarily to enhance chum, but has also proven itself to be an excellent coho producer, yielding approx. 8000 and 6000 smolts in the spring of 1984 and 1985 respectively. The channel provides 2625 m^2 (460 m long by 5-6 m wide) of spawning and juvenile rearing/ overwintering habitat. Design features include size graded (1.6 - 10.2 cm) spawning gravel, rip-rap armouring on the channel banks, and low weirs of wood construction to contol channel gradient and maintain a uniform water depth of 25 - 30 cm.

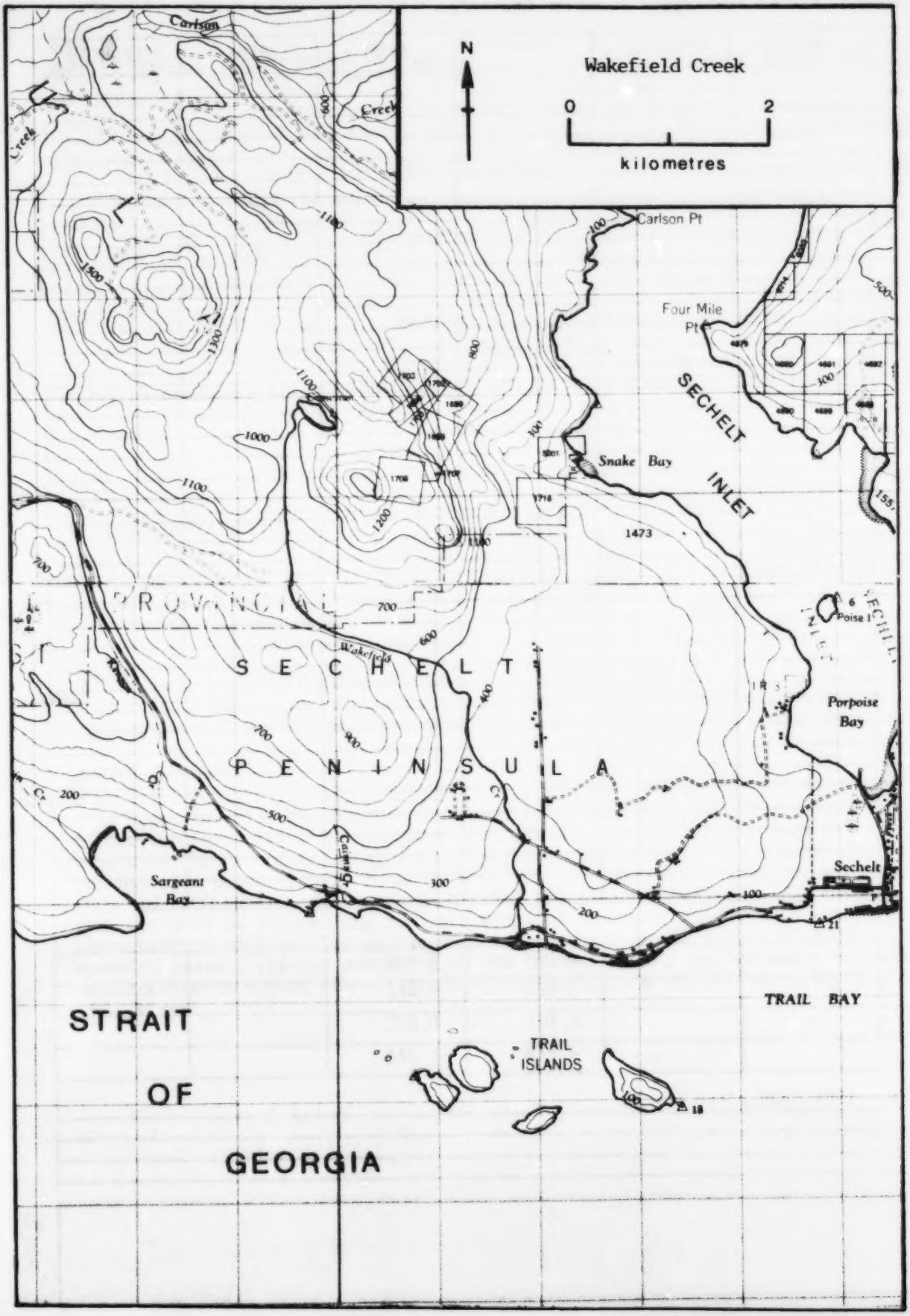
ESCAPEMENT RECORD FOR (Upper Paradise Channel)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84			100	4000		
85						

TIMING

ARRIVE			L NOV	E NOV		
START			E DEC	E DEC		
PEAK			L DEC	M DEC		
END			E FEB	E JAN		

REMARK 1984 Dead pitch count.


N
Wakefield Creek
0
2
kilometres
Carlson
Creek
Carlson Pt
Four Mile Pt
SECHELT INLET
Snake Bay
1473
Porpoise Bay
Poise I
SECHELT PENINSULA
Wakefield
Sechelt
Sargeant Bay
TRAIL BAY
TRAIL ISLANDS
STRAIT OF GEORGIA

NAME OF STREAM WAKEFIELD CREEK RAB NO. 90-1610

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 28' 123° 48'

LOCATION OF MOUTH Flows SE and S into Straits of Georgai, W. of Sechelt, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Hwy. culvert at approx 91m — chum do not further
Falls at .40km

Impass rock falls at 2.4km by Anchor Rd. (first reported '84)

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- intertidal spawning -- after removal of culvert chum as far as falls

GENERAL REMARKS

1970 It was recommended that the obstruction and culvert be removed to enable fish to utilize an additional 274m of spawning grounds. Reports from old timers indicate that at one time coho and steelhead migrated as far as 4.8km.

1974 All spawning takes place in the intertidal zone.

1976 This stream will never support good populations unless the culvert is removed.

1978 Plans for local government to make improvements to the culvert. Attempts were made to prevent logs from entering the mouth of creek.

1979 90% scouring in late Dec. survival is expected to be poor.

1980 Hwy. Department installed a new culvert this year and chum can now make it up to the falls. Sechelt Wildlife Club installed a SEP box with coho eggs from Mixal Creek. Box is located at the falls. High December floods have caused scouring of spawn.

Predation by dogs, birds and residents.

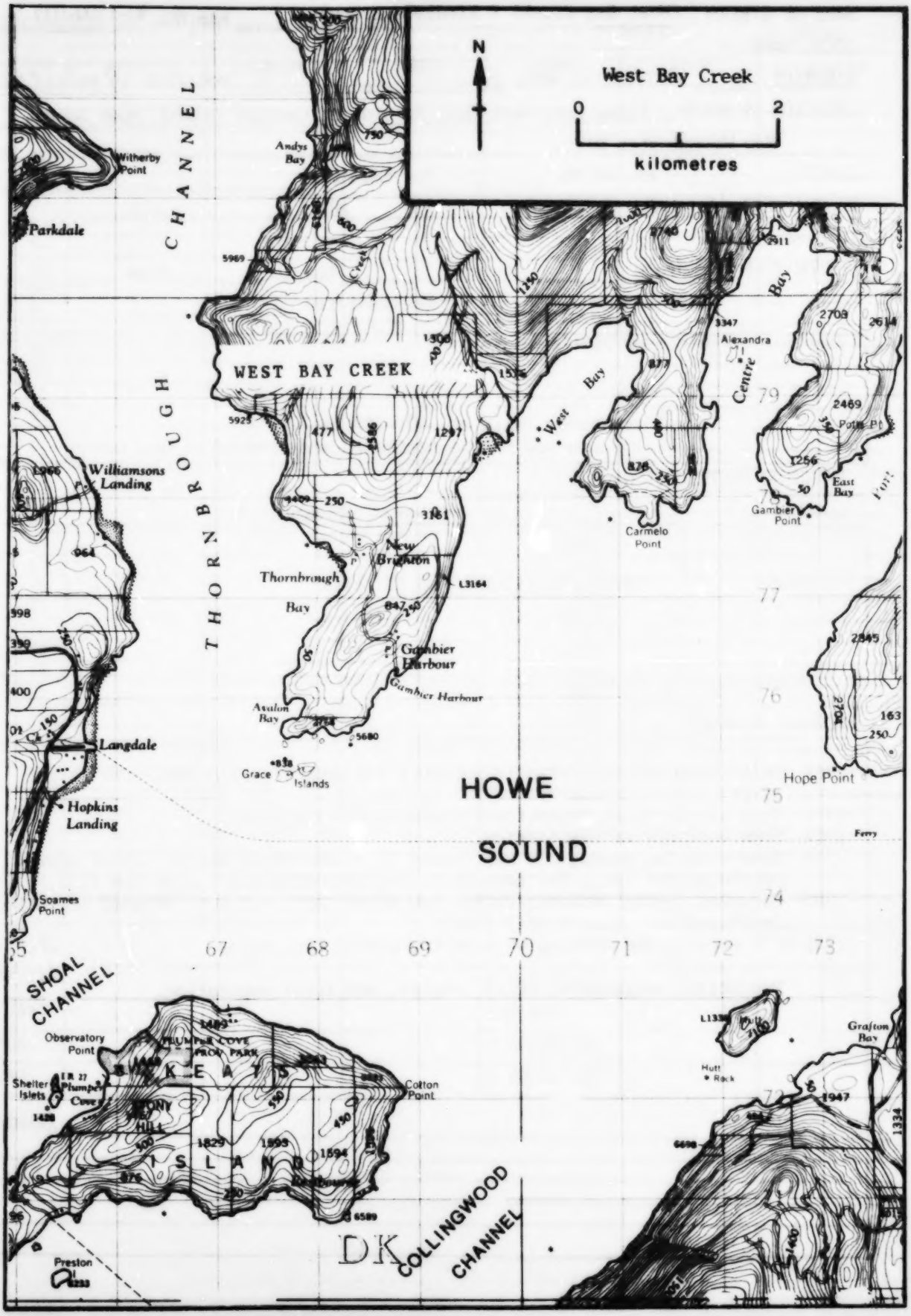
ESCAPEMENT RECORD FOR WAKEFIELD CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			25	200		
48				75		
49				75		
50			25	200		
51			75	400		
52			25	75		
53						
54						
55						
56						
57						
58						
59						
60		NO RECORDS FROM 1953 - 1969				
61						
62						
63						
64						
65						
66						
67						
68						
69						
70				450		
71				750		
72				1500		
73				750		
74				200		
75				200		
76				50		
77				200		
78				200		
79				250		
80				150		
81				100		
82				N/0		
83			200	300		
84			25	600		
85						

TIMING

ARRIVE			M OCT	L-M OCT		
START			E NOV	M OCT-E NOV		
PEAK			M NOV	M NOV		
END			M DEC	M NOV-M DEC		

REMARK


N
West Bay Creek
0
2
kilometres
Witherby Point
Parkdale
CHANNEL
Andys Bay
THORNBOROUGH
WEST BAY CREEK
Williamsons Landing
Thornbrough Bay
New Brighton
Gambier Harbour
Gambier Harbour
Avalon Bay
Grace Islands
Langdale
Hopkins Landing
Soames Point
West Bay
Centre Bay
Alexandra
Carmelo Point
Gambier Point
East Bay
Port
Hope Point
Ferry
HOWE
SOUND
SHOAL CHANNEL
Observatory Point
Shelter Islets
Plumper Cove
Cotton Point
ANTONY HILL
ISLAND
Preston
DK
COLLINGWOOD CHANNEL
Grafton Bay
Hutt Rock
67
68
69
70
71
72
73
74
75
76
77
79

NAME OF STREAM (West Bay Creek) (Riedly's Brook) RAB NO. 90-1500-035

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 28 POSITION 49° 26' 123° 24'

LOCATION OF MOUTH Flows into West Bay, S. side of Gambier Island, Howe Sound, New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

Impassable falls at 40 - 80 km
Log jams and debris monitored and removed as necessary.

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- even distribution up to falls

GENERAL REMARKS

1969 Only .40km of the stream is suitable for spawning, the remainder is too swift.
1971 This stream is an exceptional producer for its size.
1977 Some evidence of egg digging.
1979 Some scouring during mid Dec. Heavy rains destroyed approx 50% of spawn. Driftwood has mouth has been hindering upstream migration at low tide.
1980 Scouring during December rains. Low water Sept. and Oct. delayed migration. Driftwood was cleared this year.
1981 15% erosion and silting — scouring during Oct. rains.

Predation: mergansers, gulls, eagles, and local population.

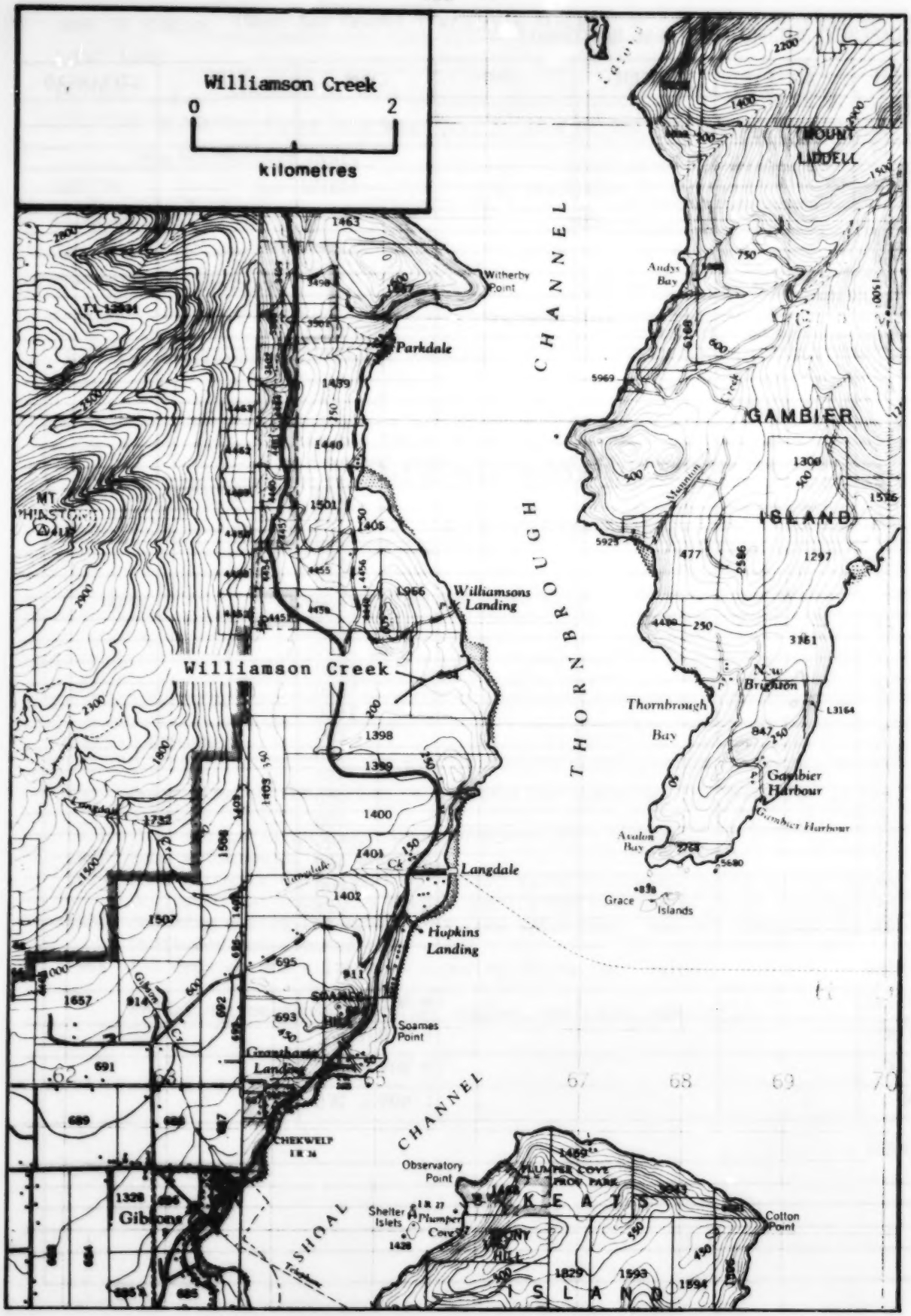
ESCAPEMENT RECORD FOR (West Bay Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64		NO RECORDS PRIOR TO 1965				
65				200		
66				700		
67				100		
68				450		
69				300		
70				1500		
71				2200		
72				2400		
73				1800		
74				1500		
75				1500		
76				200		
77				750		
78				550		
79				450		
80				900		
81				1500		
82				460		
83				1500		
84				278		
85						

TIMING

ARRIVE				M OCT-L OCT		
START				E-M NOV		
PEAK				M NOV-M DEC		
END				L NOV-L DEC		

REMARK


Williamson Creek
0
2
kilometres
MOUNT LIDDELL
GAMBIER ISLAND
THORNBOROUGH CHANNEL
Witherby Point
Parkdale
Williamsons Landing
Williamson Creek
Langdale
Hopkins Landing
Soames Point
Gibsons
CHEKWELP IR 26
SHOAL CHANNEL
Observatory Point
Shelter Islets
Plumper Cove
Cotton Point
Andys Bay
Thornbrough Bay
New Brighton
Gambier Harbour
Avalon Bay
Grace Islands
MT HIAST
1463
1459
1440
1501
1405
1398
1399
1400
1401
1402
1507
1657
1328
1829
1593
1594

NAME OF STREAM (Williamson Creek) RAB NO. 90-1510

LOCAL NAME (YMCA Creek)

DISTRICT 2 STATISTICAL AREA 28 POSITION 49°27'123°28'

LOCATION OF MOUTH Flows into Thornbrough Channel, S. of Williamsons Landing, New Westminster Dist.

LENGTH _____ km WIDTH _____ m DRAINAGE _____ km^2

DISCHARGE (m^3/s) MAX _____ MIN _____

Temperature (°C) _____

COMPOSITION: Bedrock _____ Boulder _____ Coarse _____ Fine _____

Silt & Sand _____ Unclassified _____

Barriers or Points of Difficult Ascent:

Impassable falls at 2.4km

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- evenly distributed in lower reaches.

GENERAL REMARKS

1971 This is an excellent stream, approx 3.65m wide on the average, with a constant water depth of approx 30 - 45cm. The possible capacity of this stream could be 6-8 thousand salmon.

1972 Slight erosion 5% — badly scoured during December rains. Estimated loss of spawn is about 50-60%.

1979 Flooding in late December may have caused some damage to spawn. This creek was not closely monitored for coho and it is felt there were a few entering this system.

1980 This stream appears to be an excellent stream for enhancement. Good gravel throughout.

ESCAPEMENT RECORD FOR (Williamson Creek) (Y.M.C.A. Creek, Jap Creek)

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63		NO RECORDS PRIOR TO 1965				
64						
65				400		
66				700		
67				100		
68				1600		
69				800		
70				1500		
71				3400		
72				4000		
73				2200		
74				75		
75				25		
76				100		
77				100		
78			7	N/0		
79			N/0	20		
80				75		
81				15		
82				25		
83				10		
84			N/0	650		
85						

TIMING

ARRIVE				E-M OCT		
START				M OCT-E NOV		
PEAK				M-L NOV		
END				E-M DEC		

REMARK

Porpoise Bay
(Sechelt Inlet)
Sechelt Village Limits
Sechelt
IR 2
IR 3
Marina
Trans Sta
Hospital
Trailer Park
Sewage
Chapman Creek
Wilson Creek
TRAIL
BAY
Selma Park
1329
Trailer Park
Gibsons - Sechelt Airfield
Davis Bay
Rifle Range
Trailer Park
Wilson Creek
Mission Point
Trailer Park
TSAWCOME IR 1
2 Lines East
ROBERTS CREEK PROVINCIAL PARK
Roberts Creek Prov Park
Golf Course
Fire Hall
Junk Yard
Roberts Creek
SECHELT
PACIFIC
COA
N
0
2
kilometres
Wilson Creek

NAME OF STREAM WILSON CREEK RAB NO. -

LOCAL NAME

DISTRICT 2 STATISTICAL AREA 29 POSITION 49° 26′ 123° 43′

LOCATION OF MOUTH Flows S.W. into Straits of Georgia, E. of Wilson Cr. P.O., New Westminster Dist.

LENGTH km WIDTH m DRAINAGE km^2

DISCHARGE (m^3/s) MAX MIN

Temperature (°C)

COMPOSITION: Bedrock Boulder Coarse Fine

Silt & Sand Unclassified

Barriers or Points of Difficult Ascent:

impassable falls at 8km

fish ladder passable to coho at 457meters

SPAWNING DISTRIBUTION

Species	Section of Stream Used
chum	- intertidal spawning in estuary
coho	- past fishway to upper reaches

GENERAL REMARKS

1952 This long, slow-moving stream with its reliable water supply has good potential. The lower 2.4km is suitable for spawning. The stream bed is 15 - 20 ft. wide and has a gradient of 20' in 1000'. However, this section also contains some heavily silted pools caused by minor debris barriers.

1974 The fish ladder at the mouth of the stream enters a log dumping area. The decomposition of organic material and the constant dumping of logs inhibit good production.

1976 The lower 91m has been badly abused by logging company.Gibsons Wildlife Club adopted the stream for study and enhancement.

1977 Some course changes due to log jams.A stop log at the lowest logging bridge has stopped the lower stream erosion.

1978 Fish and Wildlife Club has been doing some stream improvements on Hudson Cr., a tributary of Wilson Cr. SEP may put in some jumping pools along side the fish ladder on the rock face of falls.

1979 Extreme erosion and silting from farmlands in upper reaches.Some stream clearance work. Proposed new fishway to allow chum access to upper reaches. Severe scouring from high floods in Dec. Poor survival expected.

ESCAPEMENT RECORD FOR WILSON CREEK

YEAR	SOCKEYE	CHINOOK	COHO	CHUM	PINK	STEELHEAD
1947			75			
48			750	750		25
49			750			25
50			400			
51			400			
52			75			UNK
53						
54			NO RECORDS FROM 1953 - 1969			
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70			N/0	N/0		N/0
71			N/0	N/0		N/0
72				60		
73			N/0	N/0		N/0
74			75	75		25
75			75	25		25
76			100	4		
77			50	300		
78			100	325		
79				300		
80			100	250		
81			12	100		
82			N/0	48		
83			75	400		
84			200	500		
85						

TIMING

ARRIVE			L SEPT-E OCT	E-L OCT		
START			M-L OCT	M OCT-E NOV		
PEAK			L OCT-M NOV	M-L NOV		
END			E NOV-E DEC	E DEC-E JAN		

REMARK

Metric Conversions

CONVERSION FACTORS

The following list of convenient equivalents of measure gives the relationship between imperial units and the International System of Units (SI).

1 inch equals 2.54 cm (centimetres)
1 foot equals 0.3048 m (metre)
1 statute mile equals 1.6093 km (kilometres)

1 cm (centimetre) equals 0.393 70 inch
1 m (metre) equals 3.2808 feet
1 km (kilometre) equals 0.621 37 mile

1 acre equals 43 560 square feet
1 acre equals 0.404 69 ha (hectare)
1 square mile equals 640 acres
1 square mile equals 2.5900 km^2 (square kilometres)
1 square mile equals 259.0 ha (hectares)

1 ha (hectare) equals 10 000 m^2 (square metres)
1 ha (hectare) equals 2.4710 acres
1 km^2 (square kilometre) equals 0.386 10 square mile

1 cubic foot equals 6.2288 imperial gallons
1 imperial gallon equals 4.546 09 L (litres)
1 imperial gallon equals 1.2010 U.S. gallons
1 U.S. gallon equals 0.133 68 cubic foot
1 cubic foot equals 0.068 317 m^3 (cubic metre)
1 m^3 (cubic metre) equals 35.315 cubic feet

1 cubic foot per second for one day equals 1.9835 acre-feet
1 cubic foot per second for one day covers one square mile to a depth of 0.037 19 inch
1 acre-foot equals 1.2335 dam^3 (cubic decametres)
1 m^3/s (cubic metre per second) for one day equals 86.4 dam^3 (cubic decametre)
1 m^3/s (cubic metre per second) for one day covers one square kilometre to a depth of 0.0864 m (metre)

1 foot per second equals 0.6818 mile per hour
1 mile per hour equals 1.467 feet per second
1 m/s (metre per second) equals 3.6 km/h (kilometre per hour)
1 km/h (kilometre per hour) equals 0.2778 m/s (metre per second)

1 cubic foot per second equals 0.028 317 m^3/s (cubic metre per second)
1 m^3/s (cubic metre per second) equals 35.315 cubic feet per second

1 pound equals 0.453 59 kg (kilogram)
1 kg (kilogram) equals 2.2046 pounds

1 short ton (2000 pounds) equals 0.907 18 t (tonne)
1 t (tonne) equals 2204.6 pounds

degrees Celsius = 5/9 (degrees Fahrenheit - 32)
degrees Fahrenheit = 9/5 (degrees Celsius) + 32

FACTEURS DE CONVERSION

Voici une liste des unités de mesure impériales et leurs équivalences dans le Système international d'unités (SI).

1 pouce vaut 2.54 cm (centimètres)
1 pied vaut 0.3048 m (mètre)
1 mille terrestre équivaut à 1.6093 km (kilomètre)

1 cm (centimètre) équivaut à 0.393 70 pouce
1 m (mètre) équivaut à 3.2808 pieds
1 km (kilomètre) équivaut à 0.621 37 mille

1 acre vaut 43 560 pieds carrés
1 acre équivaut à 0.404 69 ha (hectare)
1 mille carré vaut 640 acres
1 mille carré équivaut à 2.5900 km^2 (kilomètres carrés)
1 mille carré équivaut à 259.0 ha (hectare)

1 ha (hectare) vaut 10 000 m^2 (mètres carrés)
1 ha (hectare) équivaut à 2.4710 acres
1 km^2 (kilomètre carré) équivaut à 0.386 10 mille carré

1 pied cube équivaut à 6.2288 gallons impérials
1 gallon impérial vaut 4.546 09 L (litres)
1 gallon impérial équivaut à 1.2010 gallon américain
1 gallon américain équivaut à 0.133 68 pied cube
1 pied cube vaut 0.068 317 m^3 (mètre cube)
1 m^3 (mètre cube) vaut 35.315 pieds cubes

1 pied cube par seconde pendant un jour équivaut à 1.9835 acre-pied
1 pied cube par seconde pendant un jour équivaut à un volume d'un mille carré par 0.037 19 pouce
1 acre-pied équivaut à 1.2335 dam^3 (décamètres cubes)
1 m^3/s (mètre cube par seconde) pour un jour vaut 86.4 dam^3 (décamètre cube)
1 m^3/s (mètre cube par seconde) pour un jour couvre un kilomètre carré à une profondeur de 0.0864 m (mètre)

1 pied par seconde équivaut à 0.6818 mille par heure
1 mille par heure équivaut à 1.467 pied par seconde
1 m/s (mètre par seconde) vaut 3.6 km/h (kilomètre par heure)
1 km/h (kilomètre par heure) vaut 0.2778 m/s (mètre par seconde)

1 pied cube par seconde équivaut à 0.028 317 m^3/s (mètre cube par seconde)
1 m^3/s (mètre cube par seconde) équivaut à 35.315 pieds cubes par seconde

1 livre équivaut à 0.453 59 kg (kilogramme)
1 kg (kilogramme) équivaut à 2.2046 livres

1 tonne courte (2000 livres) équivaut à 0.907 18 t (tonne)
1 t (tonne) équivaut à 2204.6 livres

degrés Celsius = 5/9 (degrés Fahrenheit - 32)
degrés Fahrenheit = 9/5 (degrés Celsius) + 32